ENGLISH

DEUTSCH

FRANCAIS

ITALIANO

ESPAÑOL

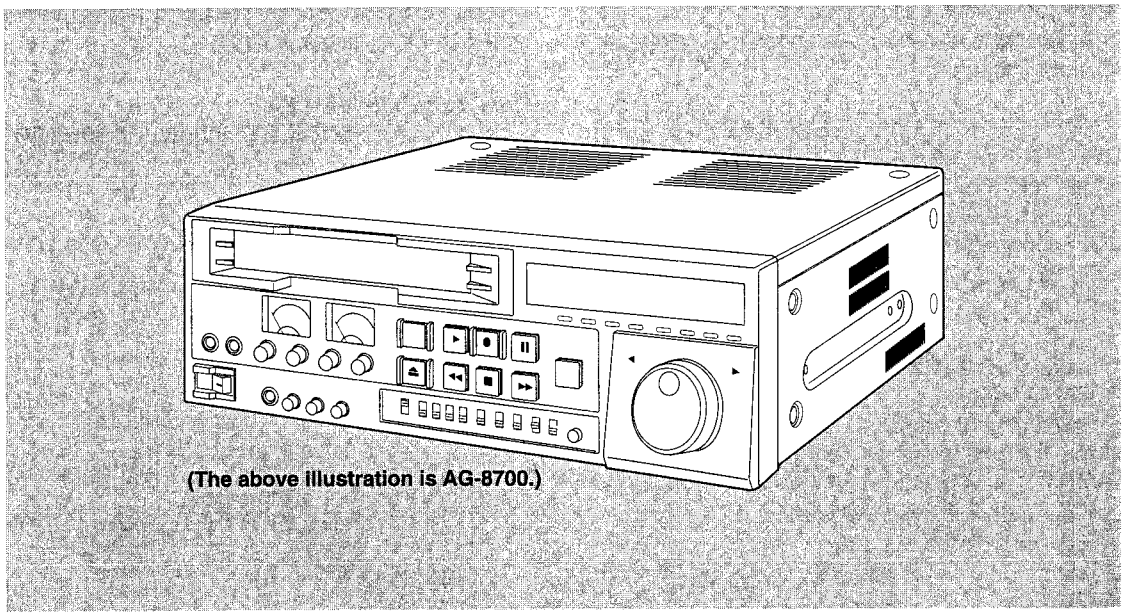
Operating Instructions

S-VHS 625 VHS PAL Hi-Fi

Video Cassette Recorder/Player

Model AG-8700E

Model AG-8600E



(The above illustration is AG-8700.)

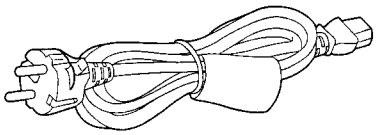
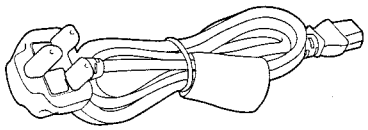
Panasonic

Before attempting to connect, operate or adjust this product, please read these instructions completely.

VQT6265

Caution for AC Mains Lead

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.
This product is equipped with 2 types of AC mains cable. One is for continental Europe, etc. and the other one is only for U.K.
Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.

FOR CONTINENTAL EUROPE, ETC. Not to be used in the U.K.	**FOR U.K. ONLY** If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.
	

FOR U.K. ONLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 13 amp fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⓐ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.
WARNING: THIS APPLIANCE MUST BE EARTHED.
IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

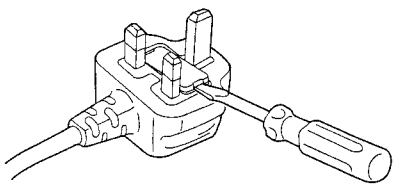
Green-and-Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

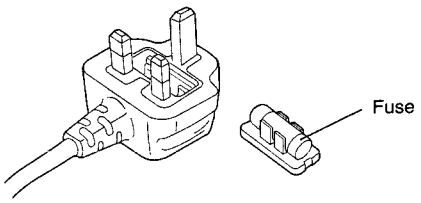
- The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol or coloured GREEN or GREEN-AND-YELLOW.
- The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
- The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

How to replace the fuse

1. Open the fuse compartment with a screwdriver.



2. Replace the fuse.



■ **THIS APPARATUS MUST BE EARTHED**

To ensure safe operation the three-pin plug msut be inserted only into a standard three-pin power point which is effectively earthed through the normal house-hold wiring.

Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

■ **DO NOT REMOVE PANEL COVER BY UNSCREWING**

To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. And do not insert fingers or any other objects into the video cassette holder.

WARNING:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

CAUTION:
To reduce the risk of fire or shock hazard, refer change of switch setting inside the unit to qualified service personnel.

Warning:
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Warnung:
Dieses Gerät entspricht der Klasse A. Bei Einsatz in einer häuslichen Umgebung kann es Funkstörungen verursachen, so daß der Benutzer dafür verantwortlich sein kann, diese Störungen zu beseitigen.

Avertissement:
Ceci est un produit de Classe A. Dans un environnement domestique, ce produit peut engendrer des interférences radio, auquel cas l'utilisateur peut être requis de prendre les mesures adéquates.

Attenzione:
Questo è un prodotto di Classe A. In un ambiente domestico, esso potrebbe causare l'interferenza radio, nel qual caso l'utente potrebbe essere tenuto a prendere le contremisure apporpriate.

Aviso:
Éste es un producto de la Clase A. En un hogar, este producto puede causar interferencias radioeléctricas, en cuyo caso, el usuario deberá tomar las medidas adecuadas.

Waarschuwing:
Dit is een "Klass A" produkt. In een bewoonde omgeving kan dit produkt radiostoring veroorzaken. In zo'n geval is het mogelijkt dat de gebruiker de geschikte maatregelen dient te nemen.

Varning:
Detta är en produkt av klass A. I hemmiljö kan denna produkt orsaka radiostörningar, vilket kan kräva att användaren måste vidtaga lämpliga åtgärder.

Advarsel:
Dette er et klasse A produkt. Ved hjemmeanvendelse kan dette produkt give radiointerferens, i hvilket tilfælde brugeren kan blive nødt til at tage passendre forholdsregler.

Varoitus:
Tämä on luokan A tuote. Kotiympäristössä tämä tuote saattaa aiheuttaa radiohäiriöitä, jolloin käyttäjä joutuu kenties suorittamaan sopivat toimenpiteet.

Advarsel:
Dette er et klasse A produkt. Ved hjemmebruk kan produktet forårsake radiointerferens, og brukeren må i så fall ta forbehold mot dette.

▭ is the safety information.

IMPORTANT:
"Unauthorized recording of copyrighted television programmes, films, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws."

Introduction

Thank you very much for purchasing the AG-8700/AG-8600.
This is a video cassette recorder for editing applications which was developed for applications in industry, educational establishments, studios and CATV transmissions.
These Operating Instructions are for use both with model AG-8700 and model AG-8600.

High picture quality

A high contrast and high-definition picture is obtained through the use of the following functions.

- S-VHS system adopted to yield clear pictures with high resolution
- Time base corrector (TBC) to ensure that pictures have minimal jitter
- Digital noise reducers (DNR) for a high signal-to-noise ratio which is a generation ahead of that featured by ordinaly pictures

Highly dependable mechanisms

A full array of such highly reliable mechanisms as the AI servo-driven large-diameter capstan, dual reel motor drive system and DD cylinder combine to yield high-grade editing.
The cleaning mechanism also alleviates the problem of video head clogging.

Full range of options for system expansion

Full justice can be given to the functions of this editor highly accurate automatic editing operations can be performed by connecting the AG-A350 (RS-422A, 9-pin system), AG-A800 or AG-A770 editing controller.

Table of Contents

ENGLISH

Controls and Their Functions

Front panel parts E-6
Counter display parts E-9
Rear panel parts E-10

Basic Operations

Switching on the power E-12
Installing a cassette E-13
Recording (AG-8700 only) E-14
Playback E-16
FF, REW, stop and pause/still E-18
Search operations E-19
AUTO STOP function E-20

Switch Settings

Setting the audio switches E-21
1. METER switch E-21
2. AUDIO MONITOR switch E-21
3. AUDIO OUT SELECT switch E-21

Setting the video switches E-22
1. VIDEO LEVEL control (AG-8700 only) E-22
2. MEMORY switch E-22

Other switch settings E-23
1. INPUT switch E-23
2. CONTROL switch E-23
3. ON SCREEN button E-23

TBC adjustments E-24

Editing Operations

Before proceeding with editing (AG-8700 only) E-28
Selecting the editing mode (AG-8700 only) E-29
Executing manual editing (AG-8700 only) E-30
AUTO CUT OUT editing
(simple automatic editing) (AG-8700 only) E-31
Split editing (AG-8700 only) E-33
Precautions for editing (AG-8700 only) E-34

Dial Menu Functions

Using the dial menu functions E-35
Set-up menu screen E-38
1. Operation/function set-up items E-38
2. Video set-up items E-39
3. Audio set-up items E-41
4. Superimpose set-up items E-42
5. Remote set-up items E-43
6. Editing set-up items E-44
7. Time code set-up items E-45

Time Code

Time code/user's bit E-47
Setting the time code switches E-48
Recording the time code/user's bit E-49
Playing back time code/user's bit E-50
Superimpose screen E-51

Connections

Connections for basic system E-53
Dubbing connections E-54
System using 9P editing controller E-55
System using MII unit E-57

Troubleshooting

Error displays E-59
Troubleshooting E-60

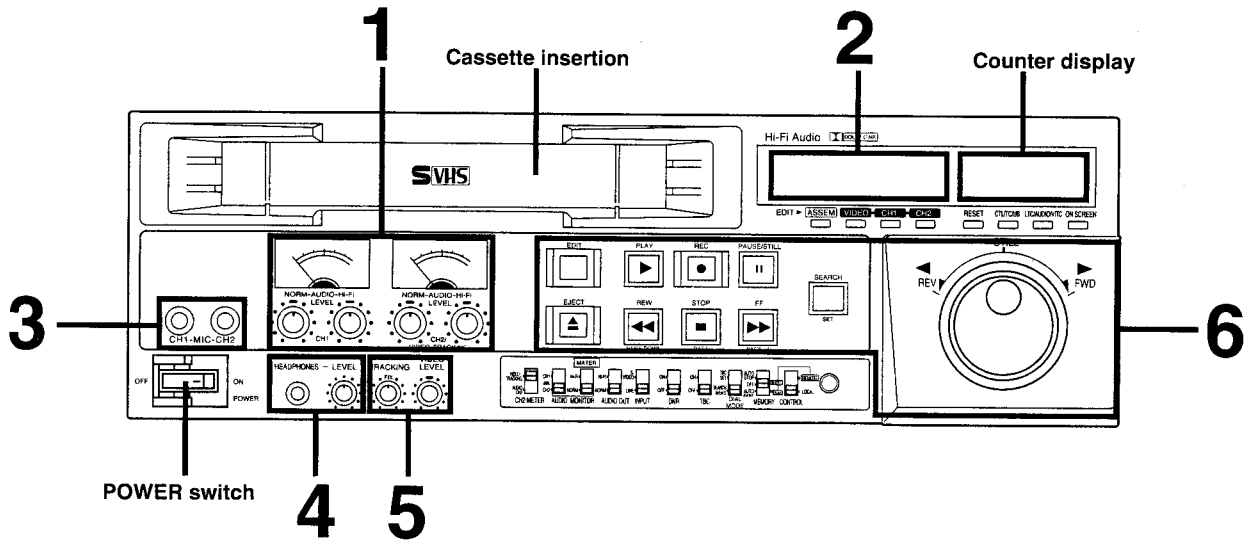
Description of Functions

Servo reference E-61
Connector signal E-62
Rack Mount Adaptor (option) E-63

Others

Accessories E-64
Regular inspections E-65
Specifications E-66

Front Panel parts



1. Level control area

Audio (CH1) level meter: ..... Display CH1 audio level.
Audio (CH2) level meter: ..... Display CH2 audio level or tracking level/video level.
Audio (CH1) NORMAL LEVEL control: ..... Adjusts recording level for normal audio CH1.
(AG-8700 only)
Audio (CH1) Hi-Fi LEVEL control: ..... Adjusts recording level for Hi-Fi audio CH1.
(AG-8700 only)
Audio (CH2) NORMAL LEVEL control: ..... Adjusts recording level for normal audio CH2.
(AG-8700 only)
Audio (CH2) Hi-Fi LEVEL control: ..... Adjusts recording level for Hi-Fi audio CH2.
(AG-8700 only)

2. Function display lamp area

WIDE lamp: ..... Lights during WIDE signal recording and WIDE tape playback.
Cassette "in" lamp [ ]: ..... Lights when a cassette is loaded.
S-VHS lamp [S-VHS]: ..... Lights in S-VHS mode.
Hi-Fi lamp: ..... Lights when Hi-Fi audio is recorded or played back.
DOLBY* NR lamp: ..... Lights when Dolby NR system is used.
FRAME lamp: ..... Lights in framing servo lock mode.
LIMITER lamp: ..... Lights when audio limiter is on.
CH2-TC lamp: ..... Lights when audio CH2 is used as an LTC track.
SERVO lamp: ..... Lights in servo lock mode.
CTL/TC/UB lamps: ..... Lamp corresponding to selected counter display mode lights.
LTC/AUTO/VITC lamps: ..... Lamp corresponding to selected time code mode lights.

3. Microphone area (AG-8700 only)

MIC jacks (CH1/CH2): ..... Connectors for M6 external microphones.

4. Headphone area

HEADPHONE jack: ..... Connects M6 stereo headphones.
HEADPHONE LEVEL control: ..... Adjusts headphones volume.

5. Picture quality adjustment area

TRACKING control: ..... Adjusts noise position.
VIDEO LEVEL control: ..... Adjusts input video level (push-pull type).
(AG-8700 only)

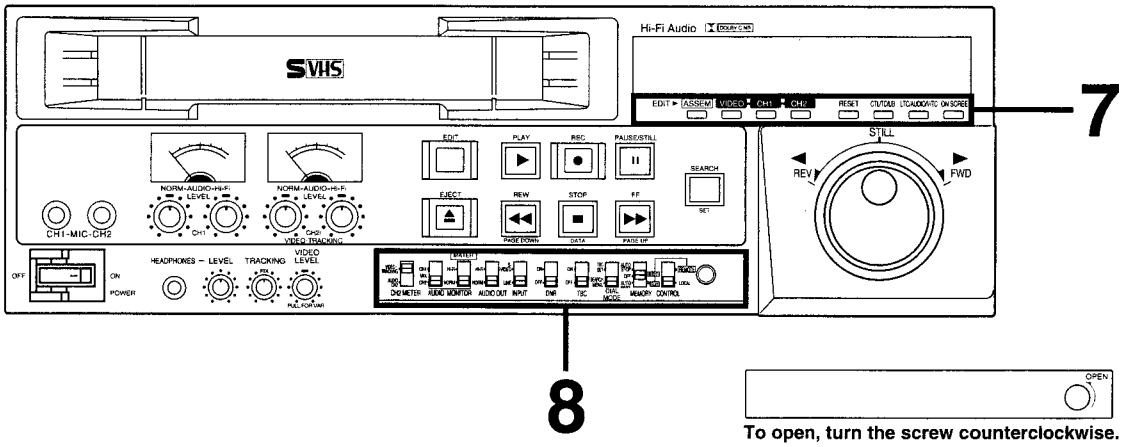
6. Basic operation area

EDIT button: ..... Starts editing when pressed together with PLAY button.
(AG-8700 only)
PLAY button: ..... Starts playback.
REC button: ..... Starts recording when pressed together with PLAY button.
(AG-8700 only)
PAUSE/STILL button: ..... Establishes still-picture mode during playback and pause mode during recording.
EJECT button: ..... Ejects cassette.
REW (PAGE DOWN) button: ..... Rewinds the tape; scrolls down page in MENU mode.
STOP (DATA) button: ..... Stops all operations; sets data in MENU mode.
FF (PAGE UP) button: ..... Rapidly advance the tape; scrolls up page in MENU mode.
SEARCH (SET) button: ..... Executes and releases search; sets menu in MENU mode; sets standard level in TBC set mode.
SEARCH/JOG dial: ..... Adjusts search speed (outer dial for SHUTTLE mode; inner dial for JOG mode); selects menu in MENU mode; sets level in TBC set mode.

***Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.**

***"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.**

Front panel parts (cont.)



7. Editing mode setting area/TBC mode setting area

ASSEMBLE (VIDEO LEVEL) button: Sets assemble editing; sets video level in TBC mode.

INSERT VIDEO (BLACK LEVEL) button: Performs insert editing of video signals and Hi-Fi audio signals; sets black level in TBC mode.

INSERT AUDIO-CH1 (CHROMA LEVEL) button: Performs insert editing of normal audio CH1; sets chroma level in TBC mode.

INSERT AUDIO-CH2 (CHROMA PHASE) button: Performs insert editing of normal audio CH2 or TC; sets chroma phase in TBC mode.

RESET (YC DELAY) button: Resets counter; sets YC delay in TBC mode.

CTL/TC/UB (SYSTEM H PHASE) button: Switches counter mode; sets system H phase in TBC mode.

LTC/AUTO/VITC (SYSTEM SC PHASE FINE) button: Switches time code read mode; sets system SC phase fine adjustment in TBC mode.

ON SCREEN (SYSTEM SC PHASE COARSE) button: Displays data on monitor TV; sets system SC phase coarse adjustment in TBC mode.

8. Function setting area

CH2 METER switch: Switches between tracking/video meter and audio CH2.

AUDIO MONITOR switch: Selects monitor audio channel.

AUDIO MONITOR (METER) switch: Switches monitor audio type.

AUDIO OUT switch: Switches output audio type.

INPUT switch: Switches video input signal.
(AG-8700 only)

DNR switch: DNR operation switch (Y and C levels set using the set-up menu).

TBC switch: Switches TBC mode.

DIAL MODE switch: Switches search dial mode to search operation, TBC control or set-up menu control.

MEMORY switch: Switches memory mode when CONTROL switch is set to "LOCAL". Switches editing mode when CONTROL switch is set to "REMOTE" (34-pin controller only).

CONTROL switch: Switches between remote and local modes.

Counter display parts

When the DIAL MODE switch is at the SEARCH position:

Mode	Counter Display	Remarks
CTL	-0:00:00:00	The shaded area remains blank for CTL interpolation.
TC	00:00:00:00	
UB	00 00 00 00	

When the DIAL MODE switch is at the MENU position:

Mode	Counter Display	Remarks
SELECT PAGE	SU:00 00	The shaded area flashes on and off.
SET PAGE	SU:00 00.00	
TC PRESET	00:00:00:00	The input digits flash on and off.
UB PRESET	00 00 00 00	

Hour meter display

The following items are indicated alternately while the RESET button is kept depressed.

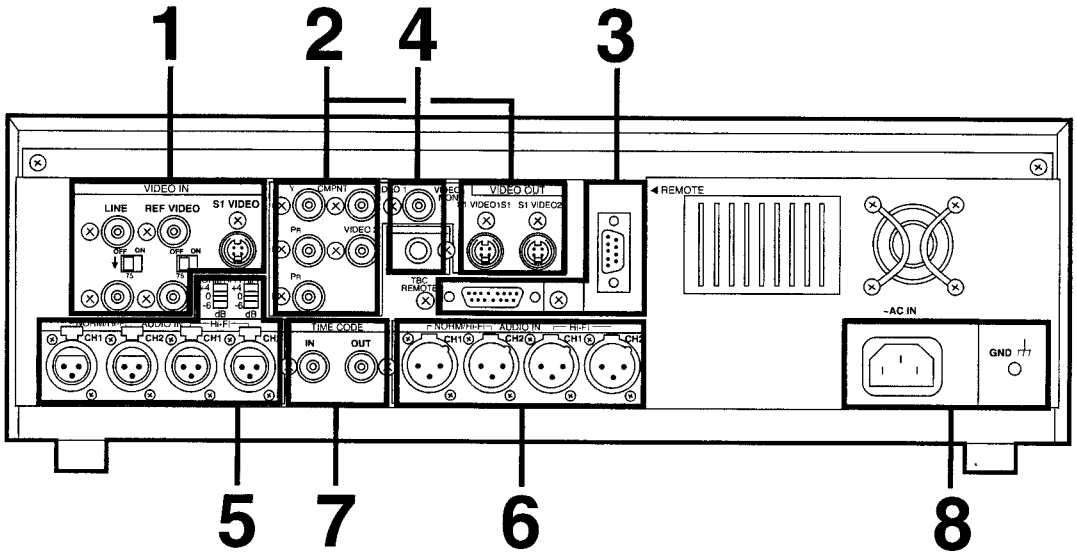
Mode	Counter Display	Remarks
Capstan rotation cumulative time	C 00 00 0H	Set the CONTROL and DIAL MODE switches to REMOTE and MENU, respectively.
Total drum rotation time	d 00 00 0H	

VITC Position display

The following items are displayed while the RESET button is kept depressed.

Mode	Counter Display	Remarks
When reading of VITC position was possible	00.00 L	Set the CONTROL and DIAL MODE switches to REMOTE and SEARCH, respectively.
When reading of VITC position was not possible	--.-- L	

Rear panel parts



1. Video input signal area

S1-VIDEO IN connector: ..... S1-VIDEO signal input connector.
(AG-8700 only)

REF VIDEO IN connector: ..... Input connector for external reference signal (with loop-through 75 Ω termination switch).

LINE IN connector: ..... Video signal input connector (with loop-through 75 Ω termination switch).
(AG-8700 only)

2. Video output signal area

S1-VIDEO OUT (1, 2) connectors: ..... S1-VIDEO signal output connectors.

VIDEO OUT (1, 2) connectors: ..... Video signal output connectors.

COMPONENT OUT connectors: ..... Component signal output connectors.

3. Remote signal area

TBC REMOTE connector: ..... Connector for TBC remote controller (15P).

REMOTE 9P connector: ..... Connector for editing controller (9P).

4. Monitor output signal area

VIDEO connector: ..... Output connector for video monitor signal.
AUDIO connector: ..... Output connector for audio monitor signal.

5. Audio input signal area (AG-8700 only)

Input audio level switches: ..... Set input level to –6, 0 or +4 dB.
NORM/Hi-Fi audio input connectors: ..... NORM/Hi-Fi audio (CH1/2) input connectors.
Hi-Fi audio input connectors: ..... Input connectors for hi-fi sound only.

6. Audio output signal area

NORM/Hi-Fi audio output connectors: ..... NORM/Hi-Fi audio (CH1/2) output connectors.
Hi-Fi audio output connectors: ..... Output connectors for hi-fi sound only.

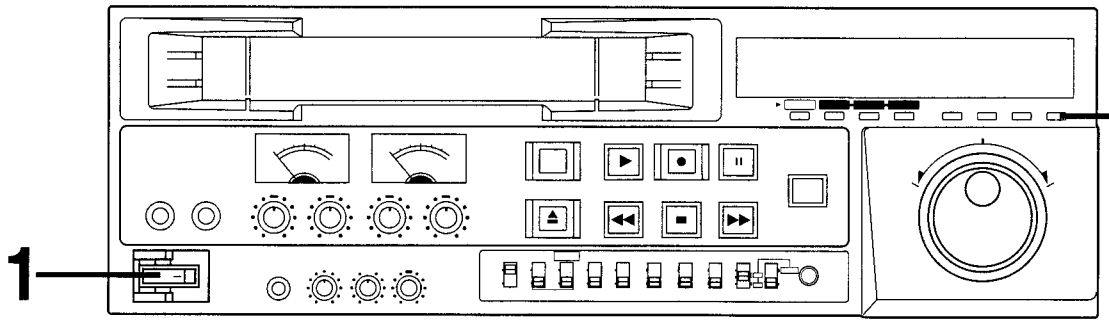
7. Time code signal area

TIME CODE IN connector: ..... Time code signal input connector.
(AG-8700 only)
TIME CODE OUT connector: ..... Time code signal output connector.

8. Power supply circuit area

GND terminal: ..... When connecting this unit to any other component, make absolutely sure that it is properly grounded by connecting this terminal.
AC IN socket: ..... Connect to AC 220~240V power outlet.

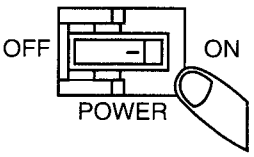
Switching on the power

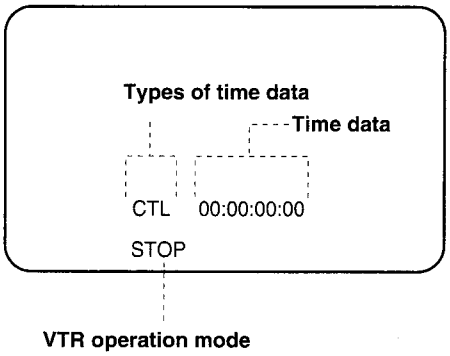


1. Press the POWER switch.

The power is now supplied to the unit.

- The display below appears through VIDEO MONITOR OUT connector if the ON SCREEN button is pressed.

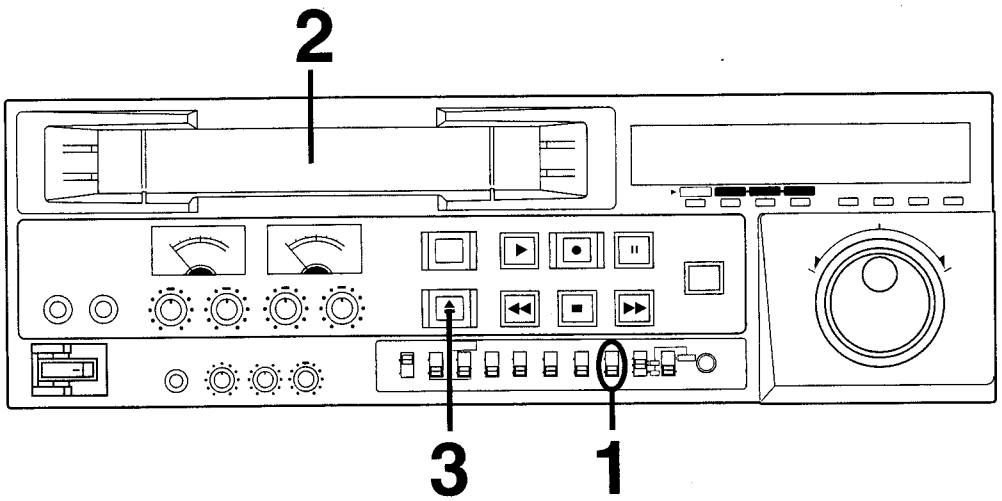




This appears only when item No. 4004 of the dial menu function is ON.

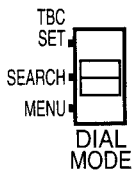
- If an error appears on the display, stop operation immediately and read page E-59.

Installing a cassette



1. Set the DIAL MODE switch to SEARCH.

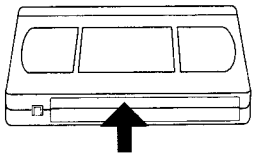
- When the DIAL MODE switch is at "MENU", operations not relating to the dial menu functions cannot be performed; when it is at "TBC SET ", operations other than PLAY, STOP, FF, REW, EJECT, REC, PAUSE, EDIT cannot be performed.



2. To install the cassette tape:

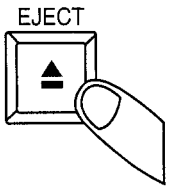
Insert the tape in the slot provided and push the center area of the cassette gently.

The cassette "in" lamp now lights in the function display lamp area.



3. To remove the cassette tape:

Press the EJECT button. Draw the emerging cassette tape out straight toward you.
The cassette "in" lamp now goes off.



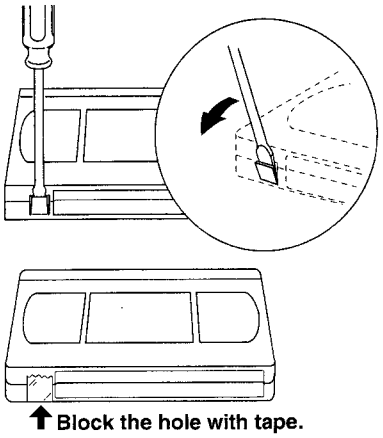
MEMO

To prevent accidental erasure of recorded material:

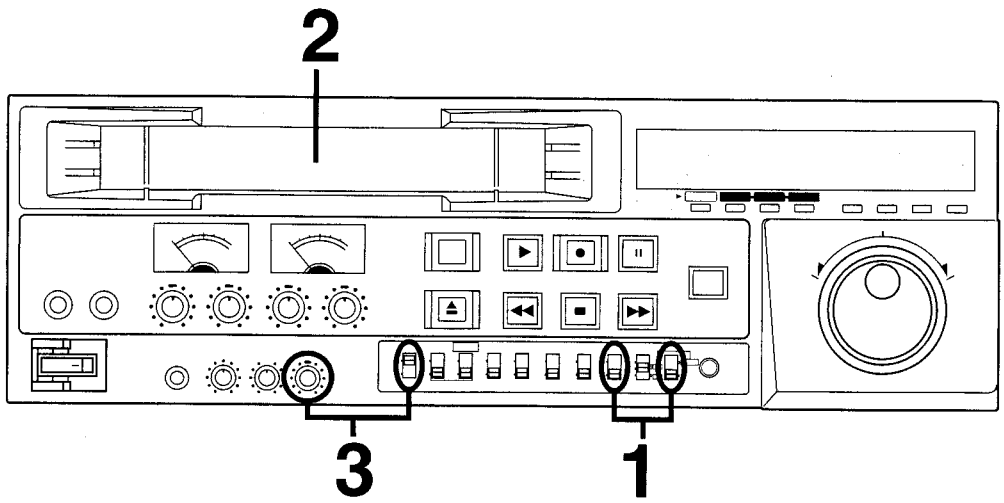
Break out the tab to prevent further recording.

To re-record:

Block the tab hole with cellophane tape.



Recording (AG-8700 only)

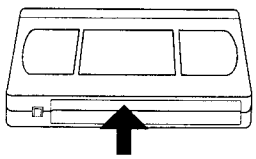


1. Set the switches (see page E-21 to E-23).

CONTROL switch → LOCAL
DIAL MODE switch → SEARCH

2. Install the cassette tape (see page E-13).

Check that the tab on the recording tape for preventing accidental erasure has not been broken out.



3. Adjust the recording level.

[1] **Set the CH2 METER switch to "VIDEO TRACKING."**

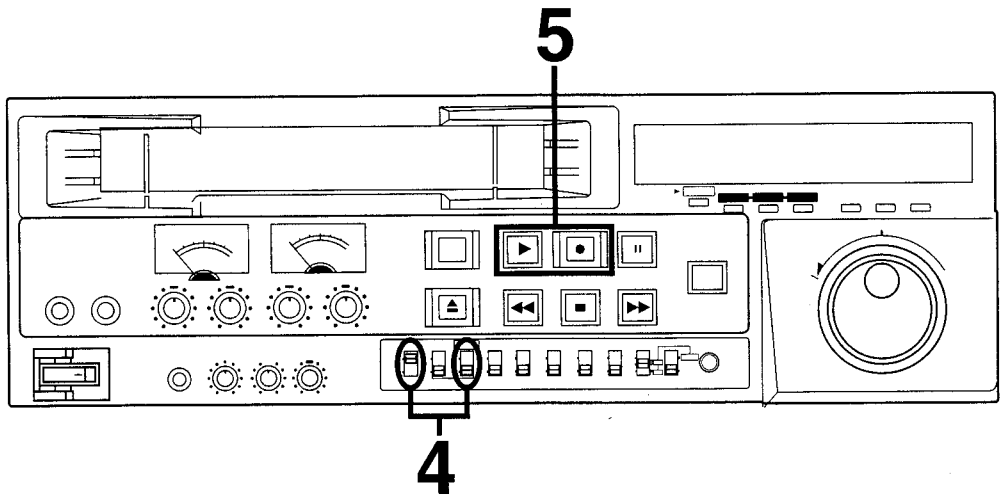
CH2 METER

[2] **Automatic adjustment**
Press in the VIDEO LEVEL control. The recording level will now be adjusted automatically.

[3] **Adjustment to desired level**
Pull out and turn the VIDEO LEVEL control.

The appropriate recording level is where "0" is indicated on the level meter.

- The AUDIO CH2 level meter indicates the recording level during recording.

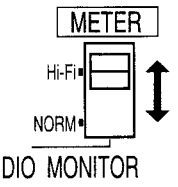


4. Adjust the audio recording level.

[1] **Set the CH2 METER switch to "AUDIO CH2."**

[2] **Select the type of sound whose level is to be adjusted.**

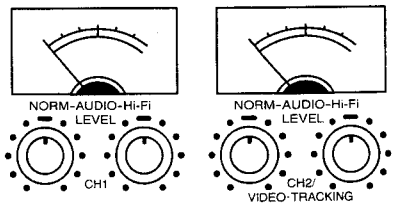
Use the METER switch for this.
Hi-Fi: The meter displays the hi-fi audio level.
NORM: The meter displays the normal audio level.



[3] **Level adjustment**

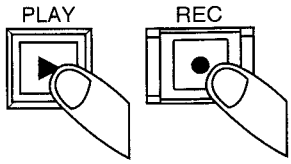
Rotate the level controls and set them to the highest possible value where the pointers do not pass beyond the "0" position on the level meters.

- Set the "AUDIO LIMITER" (item No. 3002) dial menu function to "OFF" before proceeding with the normal audio level adjustment.



5. Press the REC and PLAY buttons together.

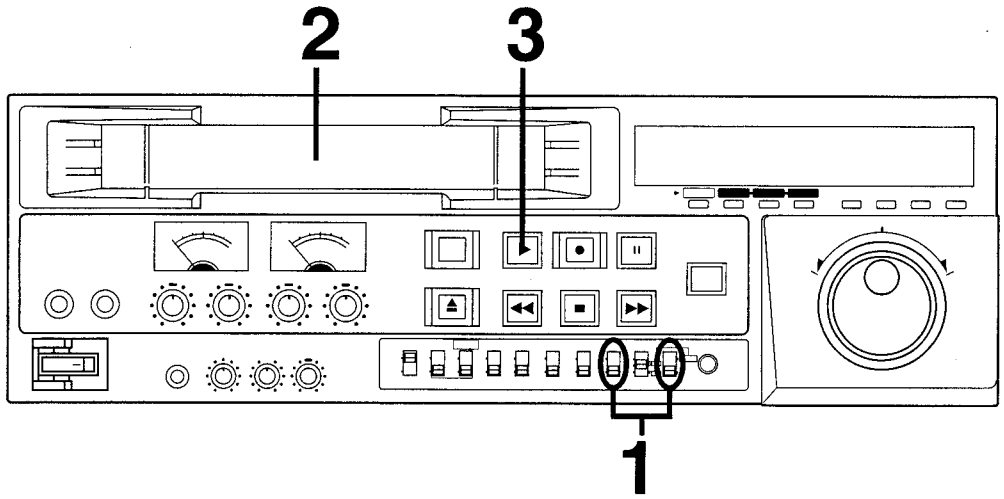
Recording now starts.



MEMO

- The dial menu functions are used to activate the audio limiter function and Dolby NR system (see page E-41). When the audio limiter function is activated, the automatic volume limiter circuit operates to ensure that the sound is recorded without distortion even if the input level should reach an excessively high level during recording.
  The Dolby NR system ensures that the sound is recorded and played back with reduced tape noise (hiss).
- When recording Hi-Fi sound, set the "HI-FI REC" (item No. 3003) dial menu function to "ON".
- When the Hi-Fi sound is not to be recorded, it is not enough merely to set the level control to the "0" position. Be sure to set the "HI-FI REC" (item No. 3003) dial menu function to "OFF".
- The Hi-Fi audio input connectors can be switched using the "HI-FI INPUT SELECT" (item No. 3004) dial menu function.
- To make a recording using an external sync signal, set the "SYNC" (item No. 1001) dial menu function to "EXT".

Playback

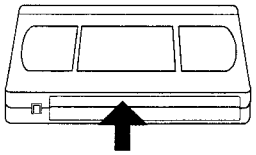


1. Set the switches (see page E-21 to E-23).

CONTROL switch → LOCAL
DIAL MODE switch → SEARCH

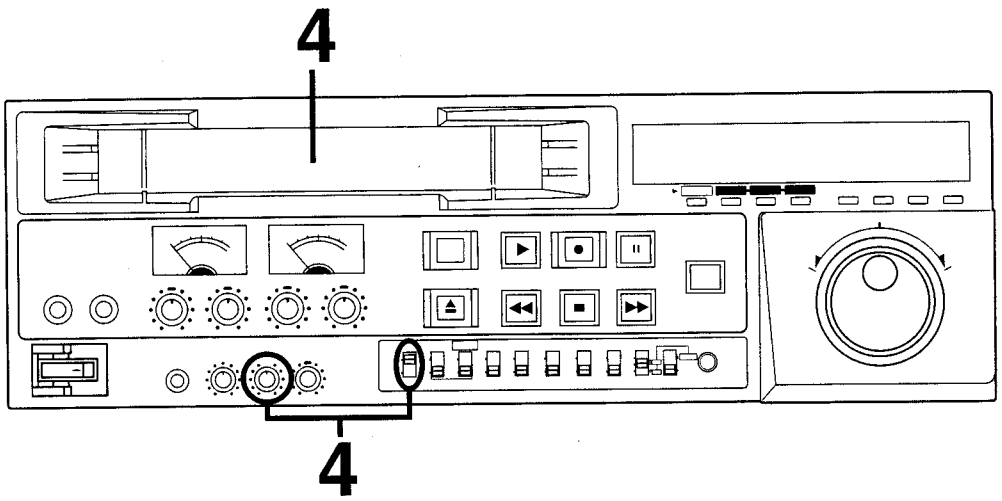
2. Install the cassette tape (see page E-13).

Install the tape with the recorded sound and pictures which are to be played back.



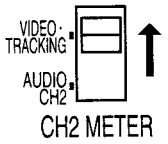
3. Press the PLAY button.

Playback now commences.



4. Adjust the tracking.

[1] **Set the CH2 METER switch to "VIDEO TRACKING."**



[2] **Normally,**

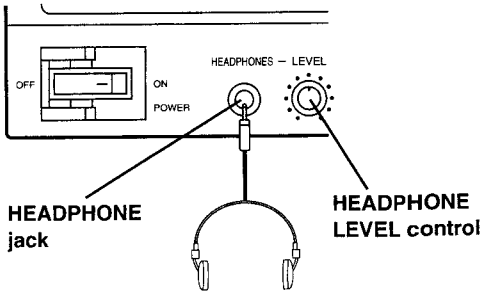
the TRACKING control is set to its centre "FIX" position for playback.

[3] **When playing back a tape which has been recorded on another VTR,**

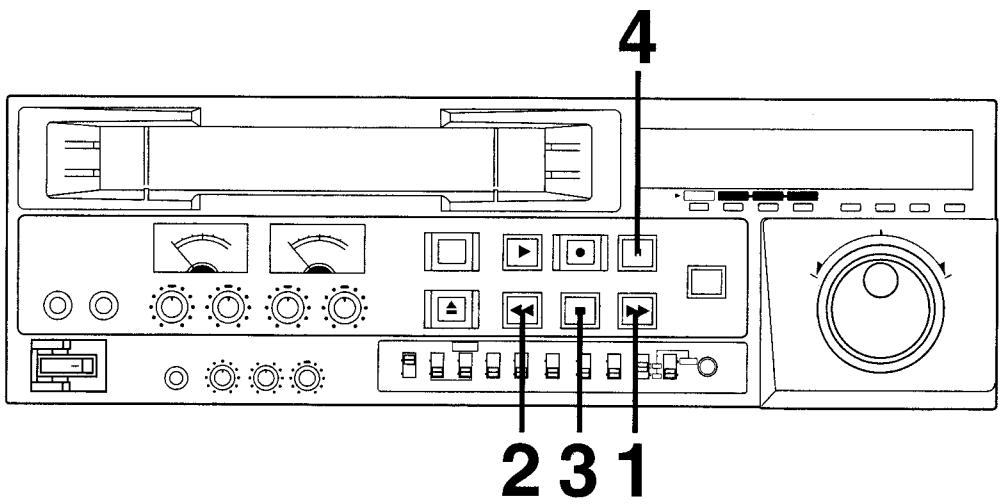
turn the TRACKING control slowly to the left or right and set so that the meter pointer deflects to the maximum.

NOTES

- Set the Dolby NR system ON using the dial menu function when playing back a tape which has been recorded using the system (see page E-41).
- If the tracking shifts out of alignment during playback, the Hi-Fi lamp will go out and the Hi-Fi sound will not be output even if it was recorded.
- When using the headphones:
  The volume level may change when high-impedance headphones are connected.
- To playback a signal using an external sync signal, set the "SYNC" (item No. 1001) dial menu function to "EXT".

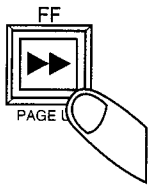


FF, REW stop and pause/still



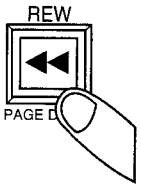
1. Fast forwarding the tape

Press the FF button.



2. Rewinding the tape

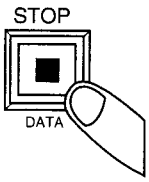
Press the REW button.



3. Stopping the tape

Press the STOP button.

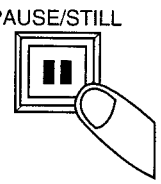
- The STOP button lights and all operations are stopped.
- When the "PB/EE SELECT" (item No. 2004) dial menu function is set to "EE", E-E pictures will appear on the TV monitor.



4. Pause

Press the PAUSE/STILL button during recording or playback.

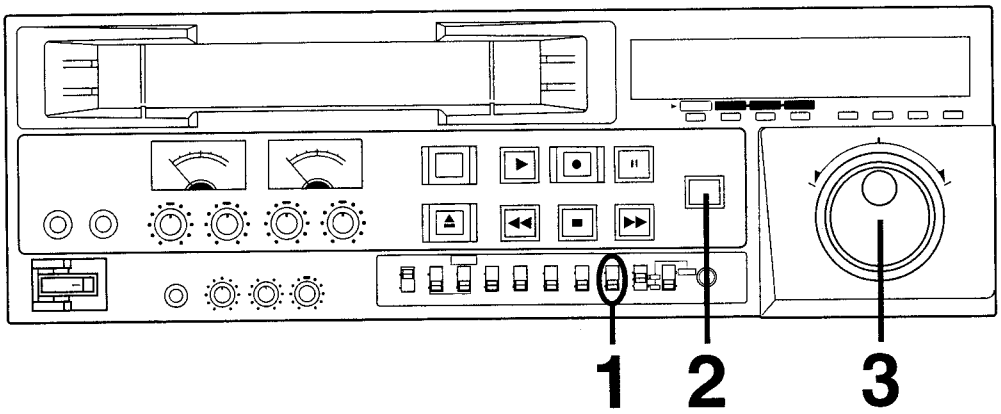
- During playback, the unit is placed in the PAUSE/STILL mode and still pictures are played back.
- During recording, the unit is placed in the REC/PAUSE mode and recording is temporarily suspended.



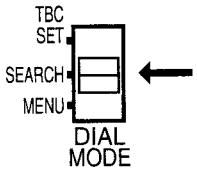
NOTES

- Set the CONTROL switch to LOCAL.
- Set the DIAL MODE switch to SEARCH.
- The unit is automatically placed in the tape protection mode if the STOP or PAUSE/STILL mode should continue beyond a certain period of time (which can be set using the item No. 1002 to 1004 dial menu function). (See page E-38.)

Search operations

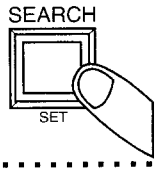


1. Set the DIAL MODE switch to "SEARCH".



2. Press the SEARCH button.

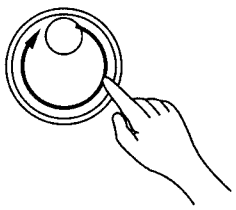
The SEARCH button, PLAY button and PAUSE/STILL button light, indicating that a search can now be performed.



3. Operate the search dial.

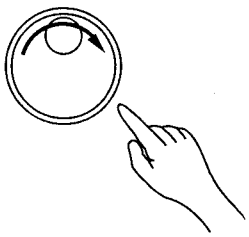
The inner dial is used for the jog mode and the outer dial for the shuttle mode.

- When the dial is turned toward the right, the tape is played back in the forward direction (the FWD lamp lights); conversely, when it is turned toward the left, the tape is played back in the reverse direction (the REV lamp lights).



[1] **JOG mode**

Turn the outer dial to the center position. The tape is played back at a speed ranging from a still picture to ±1x the normal speed depending on the speed at which the inner dial is turned.
When the turning of the dial is stopped, a still picture display appears regardless of the switch setting.



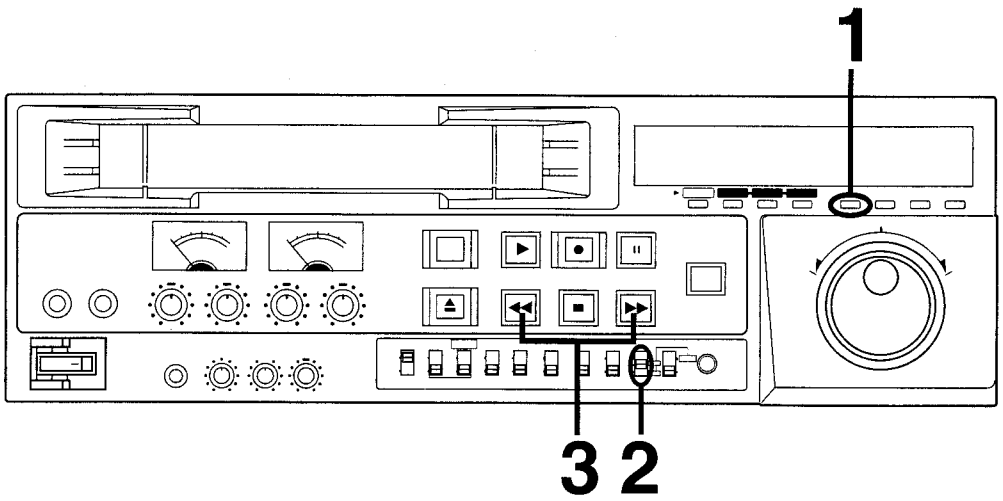
[2] **SHUTTLE mode**

In response to the angle to which the outer dial is turned, the tape can be played back at a speed ranging from 0 to ±32x faster or slower than normal tape speed. (However, when the tape approaches the end, the low-speed search mode is established in order to protect the tape from possible damage.) A still picture results at the centre (click-stop) position.
When the tape is played back at the –32x speed, the picture on the monitor screen will slip: this is normal and not indicative of malfunctioning.

NOTES

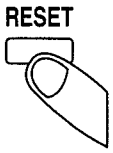
- Keep the CONTROL switch at the LOCAL position.
- When setting the direct search mode, set the "DIRECT SEARCH" (item No. 1005) dial menu function to "ON." (See page E-38.)

AUTO STOP function

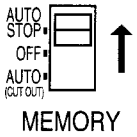


1. Press the RESET button at the position where the tape is to be automatically stopped.

The tape counter displays "0:00:00:00."

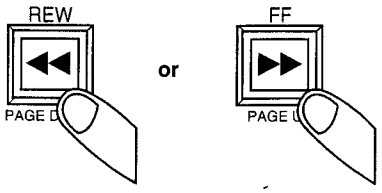


2. Set the MEMORY switch to AUTO STOP.



3. Proceed with fast forward or rewinding.

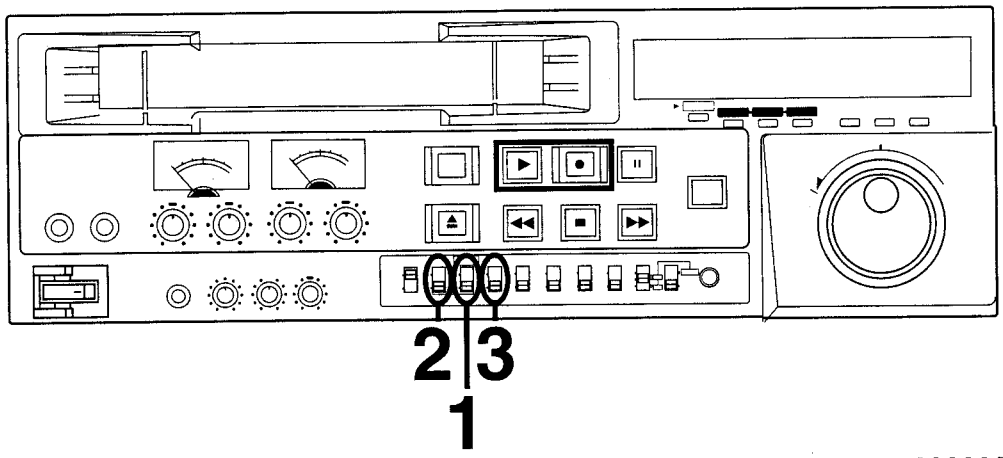
The tape automatically stops when the tape counter display nears the "0:00:00:00" mark.



NOTE

- The AUTO STOP function does not work when:
  - The CONTROL switch is at the "REMOTE" position.
  - The CTL/TC/UB button is at any position except "CTL."
  - DIAL MODE switch is at the "MENU" position.
- The AUDIO OUT level can be selected using the switch (located below the circuit board's metal clamp) on the AUDIO2 printed circuit board. (See page E-56.)

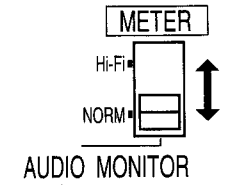
Setting the audio switches



1. Setting the AUDIO MONITOR (METER) switch

This is used to select the sound displayed on the level meter and the sound which is output to the headphone jack on the front panel or the AUDIO MONITOR connector on the rear panel.

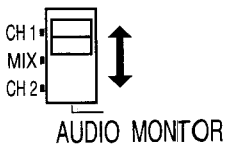
Hi-Fi: Hi-Fi sound is selected.
NORM: Normal sound is selected.



2. Setting the AUDIO MONITOR switch

This is used to select the audio channel for the sound output to the headphones jack on the front panel and the AUDIO MONITOR connector on the rear panel.

CH1: The CH1 sound is output.
MIX: Mixed CH1 and CH2 sound is output to the headphones jack CH1 sound is heard at the left and
CH2: CH2 sound at the right.
The CH2 sound is output.



- No sound will be heard from normal audio CH2 when the "AUDIO CH2" (item No. 3006) dial menu function is set to "LTC."

3. Setting the AUDIO OUT switch

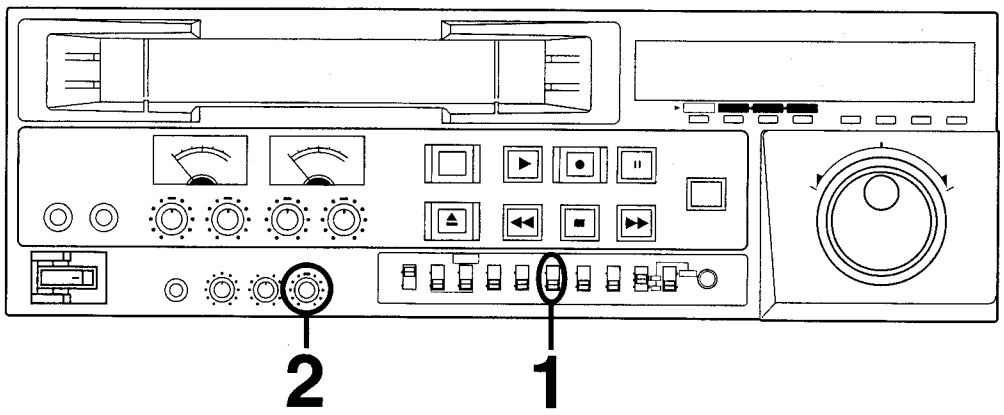
This is used to select the sound which is output to the AUDIO OUT (NORM/Hi-Fi) connectors on the rear panel.

Hi-Fi: Discriminates between Hi-Fi and normal audio automatically. When there is no Hi-Fi audio output signal, normal audio will be automatically outputted.
NORM: Normal sound is selected.

NOTE

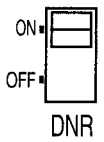
■ Set "HI-FI REC" (item No. 3003) dial menu function to "ON", to record Hi-Fi sound.
ON: Hi-Fi sound and normal sound are recorded.
OFF: Normal sound is recorded.

Setting the video switches



1. Setting the DNR (digital noise reducer) switch

- When playing back a tape with a reduced signal-to-noise ratio, this switch can be used to reduce the noise level as warranted by the picture quality. (However, a slight deterioration in the resolution will result.)
- Keep this switch OFF during editing. The picture may be disturbed if a tape is repeatedly edited.
- Bear in mind that when material is dubbed repeatedly in the DNR ON mode, after-imaging will be prevalent.
- The degree of S/N ratio enhancement can be controlled by setting dial menu function item No. 2013 and 2014.
- The DNR switch functions when the TBC switch is ON.

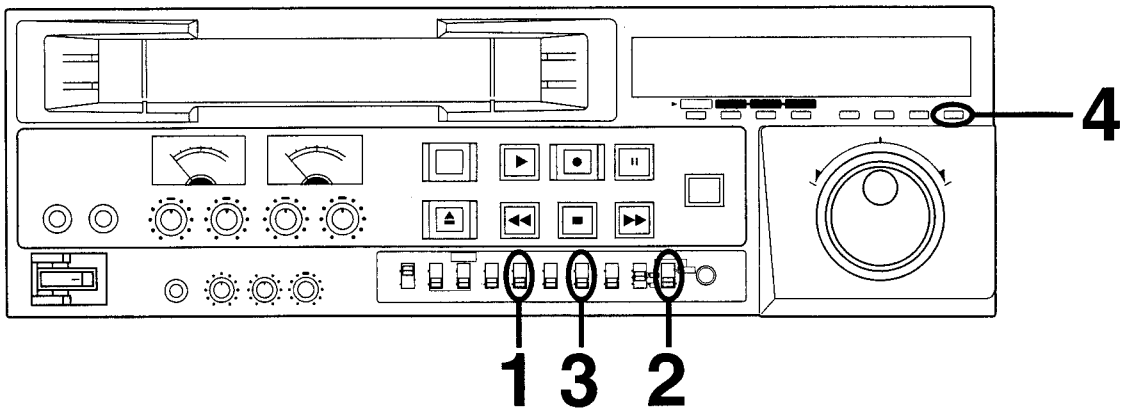


2. Setting the VIDEO LEVEL control (AG-8700 only)

This is used to adjust the video level automatically during recording.

PUSH: The video level is automatically adjusted.
PULL: The video level is not automatically adjusted.

Other switch settings

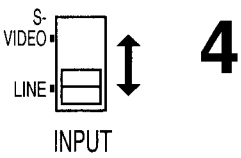


1. Setting the INPUT switch (AG-8700 only)

During editing this switch is set to the position corresponding with the input signal.

S-VIDEO: When recording video signals which have been input to the S1-VIDEO IN connectors.

LINE: When recording video signals which have been input to the VIDEO IN connectors.



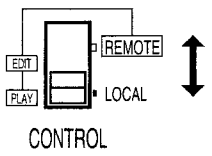
2. Setting the CONTROL switch

This is used to set the unit's control mode.

REMOTE: Set to this position for operating the unit by remote control using an controller, etc. Only the unit's eject function will now be operational.

LOCAL: Set to this position to operate the unit.

- The operation modes of this unit in the REMOTE mode can be set using dial menu item No. 5001.

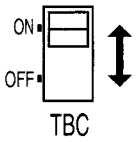


3. Setting the TBC switch

This is used to activate the TBC (Time Base Corrector) for video output signals.

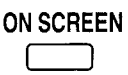
ON : TBC is functioned.

OFF: TBC is by-passed.



4. Setting the ON SCREEN button

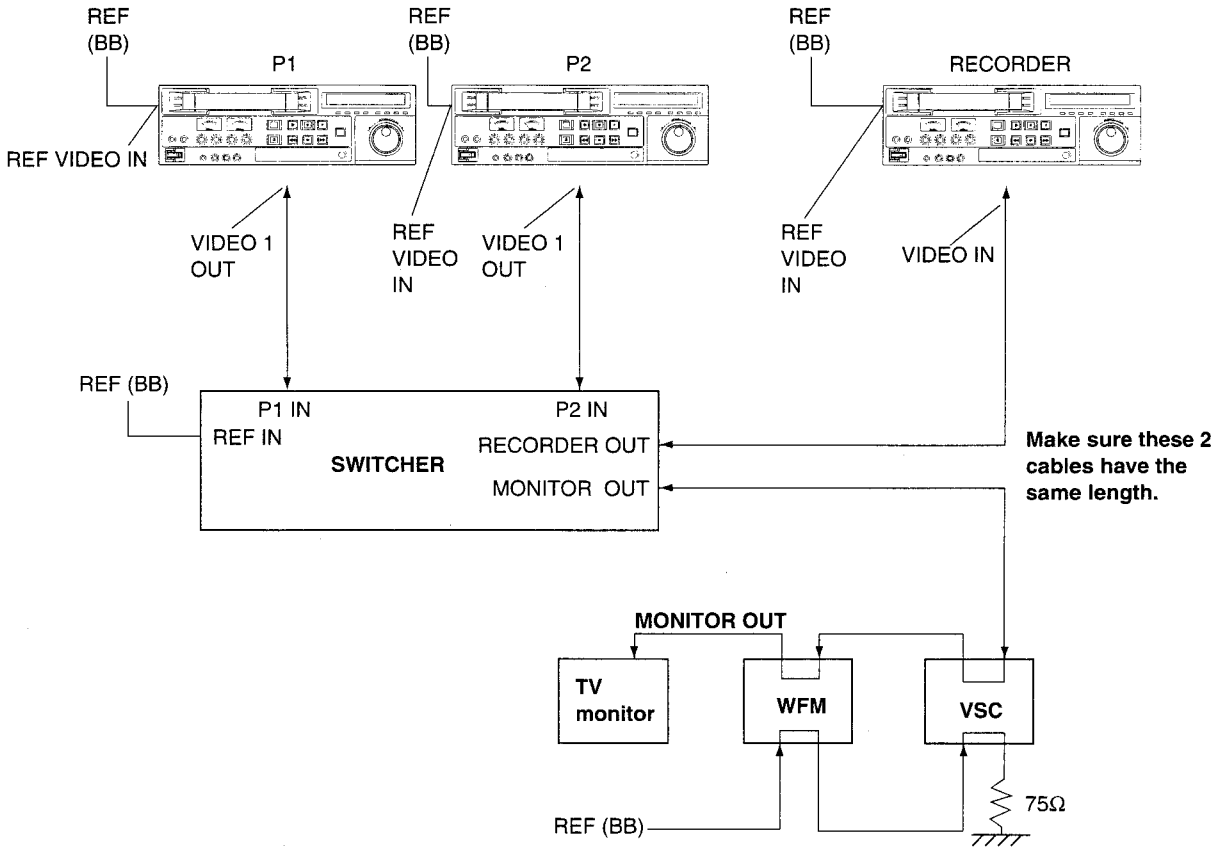
This is used to add a time code or other superimpose signal to the video signal which is output from the VIDEO MONITOR connector.



TBC adjustments

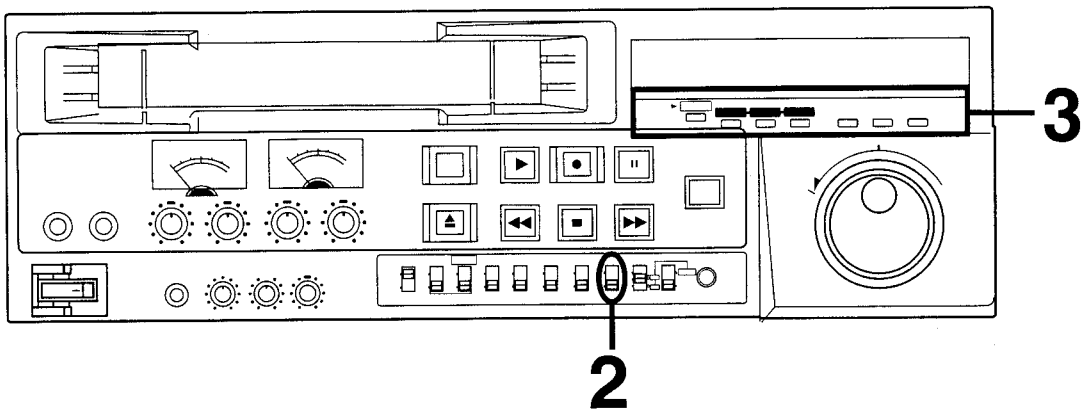
The TBC can be used to reduce the amount of jitter and distortion called skew (a phenomenon where the top part of the picture is bent horizontally).
For AB roll editing (a method of editing using two source units) using an editor, the TBC must be adjusted after it has been connected to the system so that the material will be edited accurately and error-free. (The TBC must be readjusted every time its connecting cable is replaced or its connections are changed.)

1. Make the connections as shown in the figure below.



[1] Supply the external reference signal from the sync signal generator to the unit.

[2] Provide a composite connection for the video signals.



2. Set the DIAL MODE switch to "TBC SET."

■ The TBC SET menu (Menu No.1) is output on the monitor.

•Notes
The first menu is not output if "TBC REMOTE" (item No. 2015) dial menu function is set to "REMOTE".
Either set "TBC REMOTE" to "LOCAL" or use an external TBC encoder to perform adjustment.

Menu No.1

TBC CONTROL

1. VIDEO LEVEL
2. BLACK LEVEL
3. CHROMA LEVEL
4. CHROMA PHASE
5. YC DELAY
6. SYSTEM H PHASE
7. SYSTEM SC PHASE FINE
8. SYSTEM SC PHASE COARSE

3. Proceed with the discrete adjustment.

Since the TBC of this unit has already been adjusted using standard colour bars, the control normally used is set to "0." If readjustment is required with the tape being used, proceed from the left.

- The various items correspond to the eight buttons (TBC mode setting area) below the display tube, in order starting from the left.

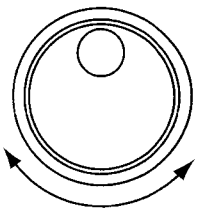
[1] Playback a tape with colour bars recorded on it.
[2] Adjust the various items.
Press the button corresponding to the item you wish to adjust (TBC mode setting area) and Menu No.2 is displayed. Make adjustments by turning the JOG dial to move the cursor to the right or left.

Menu No.2

TBC CONTROL NO.1

1. VIDEO LEVEL

3 2 1 0 1 2 3
−.....▬.....+



NOTE

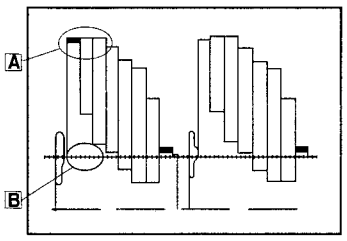
- No adjustments can be made on the TBC SET screen menu when the screen has stopped.

TBC adjustments (cont.)

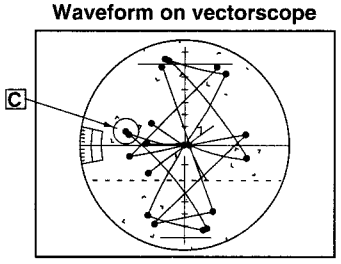
[3] Adjust the various items.

Adjust the various items so that the displays on the waveform monitor (WFM) and vectorscope (VSC) appear as described below.

Waveform on waveform monitor



Waveform on vectorscope



A: **•Video level**
Adjust to 1V.

B: **• Black level**
Adjust to eliminate any deviation.

C: **•Chroma level**
Adjust so that the specified level is obtained.

•Chroma phase
Adjust so that the vector waveform traces are positioned inside the ⊞ mark on the VSC.

[4] Adjust the YC delay control.

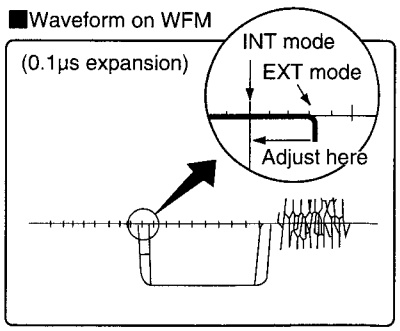
(Normally, adjustment is unnecessary.)
Adjust this to compensate for a shift in YC delay (colour shift) of the tape being played back. Each step represents an adjustment of approx. 70ns.

[5] Adjust the SYSTEM PHASE controls.

❶ Playback the standard colour bars on VTR P1.
❷ Adjust the SYS PHASE controls on VTR P1.
Adjust them so that the waveform shown below appears on the waveform monitor (WFM).

1) Set the WFM to the INT mode and set the expansion to 0.1µs.
2) Check the horizontal sync position.
3) Now set the WFM to the EXT mode.
4) In the EXT mode adjust the SYS PHASE controls so that the H SYNC signal is aligned with the position above. First adjust H, then use SC COARSE for the overall adjustment and SC FINE for the fine adjustment.
5) Adjust the SYS PHASE controls on VTR P2 in the same manner.

■Waveform on WFM



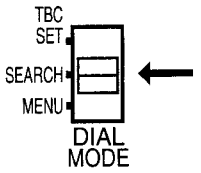
(Pay close attention to the sync signal rise.)

MEMO

Description of adjustments

VIDEO LEVEL: ..... Adjusts the video level.
BLACK LEVEL: ..... Adjusts the black level.
CHROMA LEVEL: ..... Adjusts the chroma level.
CHROMA PHASE: ..... Adjusts the chroma phase.
YC DELAY: ..... Adjusts the YC delay.
SYSTEM H PHASE: ..... Adjusts the phase of the horizontal sync signal from the built-in sync generator to the external reference signal supplied from the external source in order to achieve genlock.
SYSTEM SC PHASE: ..... Adjusts the phase of the subcarrier signal from the built-in sync generator to the external reference signal supplied from the external source in order to achieve genlock.
COARSE: ..... Adjustment in 4 steps of 90°.
FINE: ..... Continuous adjustment, range of just over 90°.
Together, these controls cover 360°.

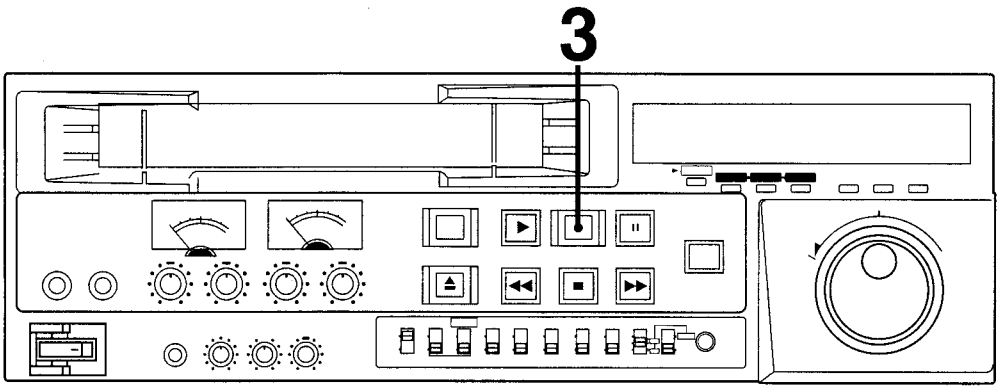
4. After completing TBC adjustments, set the DIAL MODE switch to "SEARCH."



NOTES

Pressing the SEARCH (SET) button when the Menu No. 1 is displayed returns the settings for all items, except for SYSTEM PHASE, to their initial values.
Pressing the SEARCH (SET) button when Menu No. 2 is displayed returns only the setting for that item to its initial value.

Before proceeding with editing (AG-8700 only)



"Editing" consists in taking pre-recorded tapes, combining various material into one part, cutting out the parts which are not desired and connecting only what is required into a single programme. There are two editing modes: assemble and insert. Complete the operations listed below before proceeding with editing.
(CTL editing is the type of editing which is possible when only this unit is used for editing. Time code editing is not possible.)

1. Complete the adjustments and settings (see page E-21 to page E-23).

2. Check whether the FRAME LOCK lamp lights when the following steps are taken.

[1] **Playback the tape which is to be edited.**

[2] **Use the TRACKING control on the source unit so that the TRACKING meter pointer deflects to its maximum.**

[3] **Set the TRACKING control on the editor to its center clickstop position.**

[4] **Set the "FRAME SERVO" (item No. 6005) dial menu function on the editor unit to "ON".**

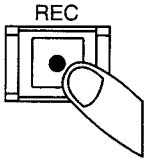
[5] **Check that the FRAME lamp at the source unit side has lighted.**
■ If the lamp is off, set the "SYNC" (item No. 1001) dial menu function on the editor to "NORMAL".

[6] **Check that the FRAME lamp on the editor has lighted.**
■ If the FRAME lamp is off, the edited pictures may be thrown into disarray.

3. The material to be edited can be checked on the TV monitor.

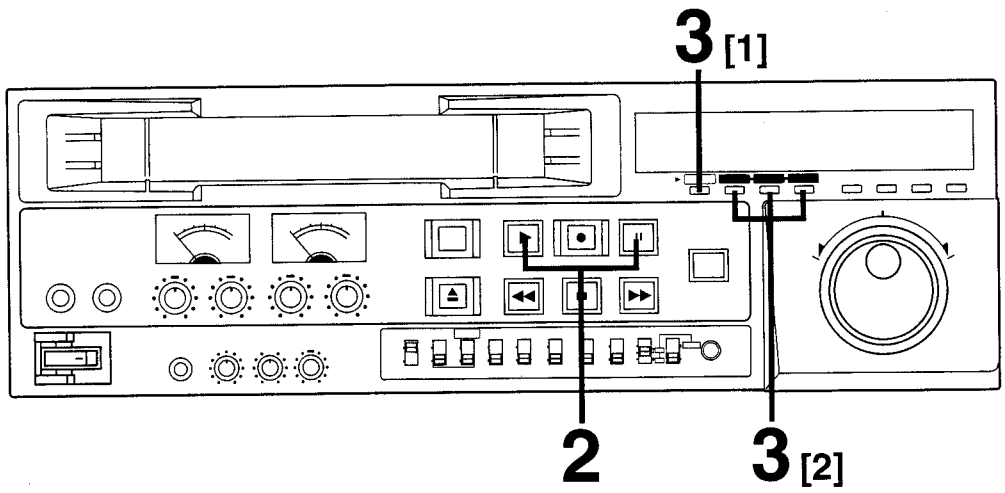
Press the REC button while playback is in progress.

E-E pictures can be viewed while the REC button is depressed.
Signals are not recorded onto the tape.



- E-E pictures cannot be viewed if a cassette has been inserted without its accidental erasure prevention tab.

Selecting the editing mode (AG-8700 only)

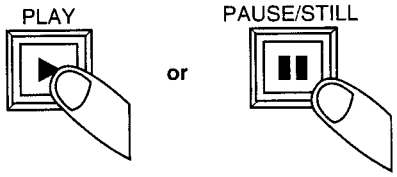


1. Proceed first with the editing preparations.

Refer to "Before proceeding with editing" on the previous page for details.

2. Set the unit to the PLAY or PLAY/STILL mode.

Press the PLAY button or PAUSE button.



3. Select the editing mode.

[1] Assemble editing

Press the ASSEMBLE button.

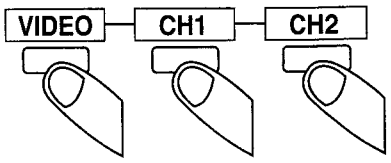
When it is pressed once, the button lights; when it is pressed again, its light goes off.

[2] Insert editing

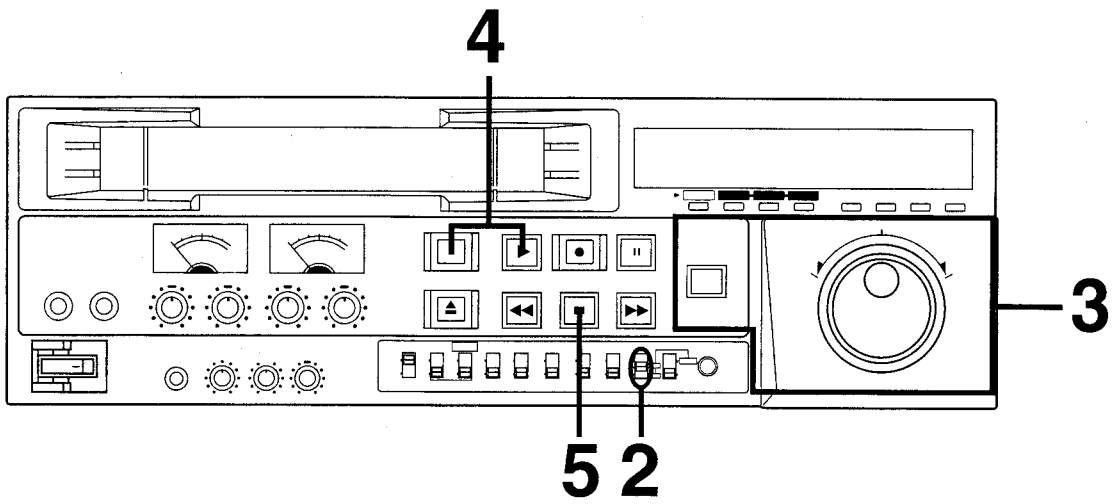
Select the INSERT (VIDEO, AUDIO-CH1, AUDIO-CH2) button corresponding to the editing.

When it is pressed once, the button lights; when it is pressed again, its light goes off.

Insert editing applies only to the signals for the button which has lighted.



Executing manual editing (AG-8700 only)

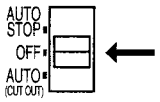


1. Select the editing mode.

Refer to "Selecting the editing mode" on the previous page for details.

2. Set the MEMORY switch to OFF.

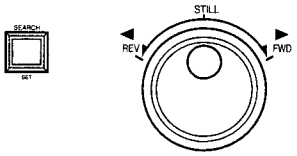
If this switch is at the AUTO (CUT OUT) position, editing will be cut out and stopped when the counter display shows "0:00:00:00."



MEMORY

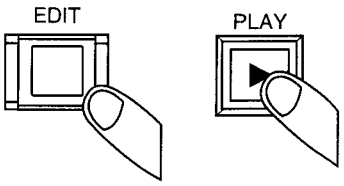
3. Find the edit start point by conducting a search operation and place the unit in the still picture mode.

Refer to page E-19 for details on search operations.

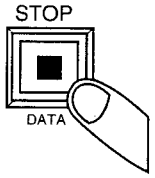


4. Press the PLAY button while pressing down the EDIT button.

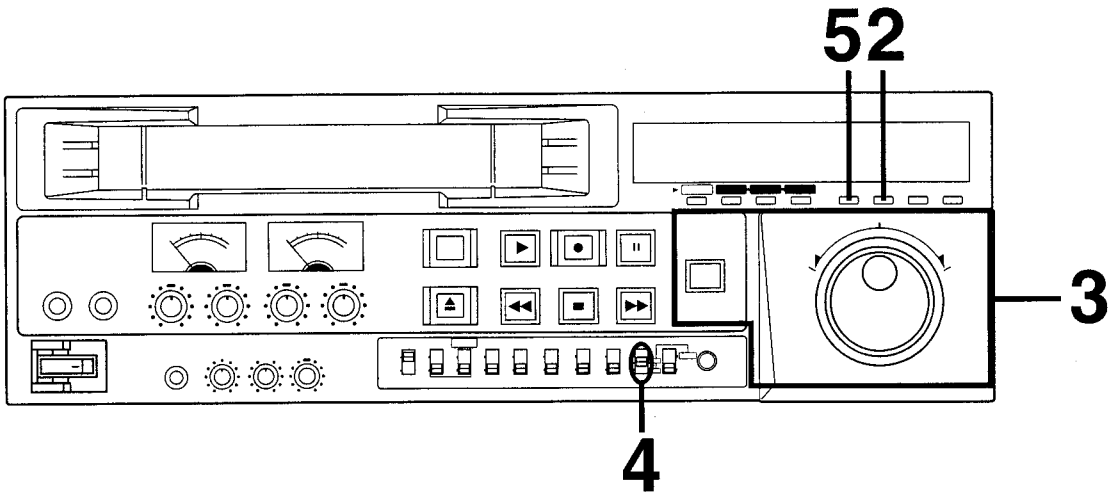
The tape jogs back automatically for about 3 seconds, and editing commences. (When colour framing for about 5 seconds.)



5. Press the STOP button to stop editing.



AUTO CUT OUT editing (simple automatic editing) (AG-8700 only)



1. Select the editing mode.

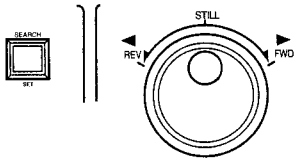
Refer to "Selecting the editing mode" on page E-29 for details.

2. Set to CTL mode with the CTL/TC/UB

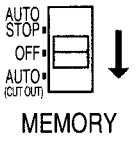
Press the CTL/TC/UB button to switch to the CTL mode.
Each press of the button causes one of the function indicator lamps, "CTL," "TC" or "UB," to light.

3. Find the edit end point by conducting a search operation and place the unit in the still picture mode.

Refer to page E-19 for details on search operations.

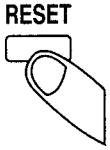


4. Set the MEMORY switch to AUTO (CUT OUT).

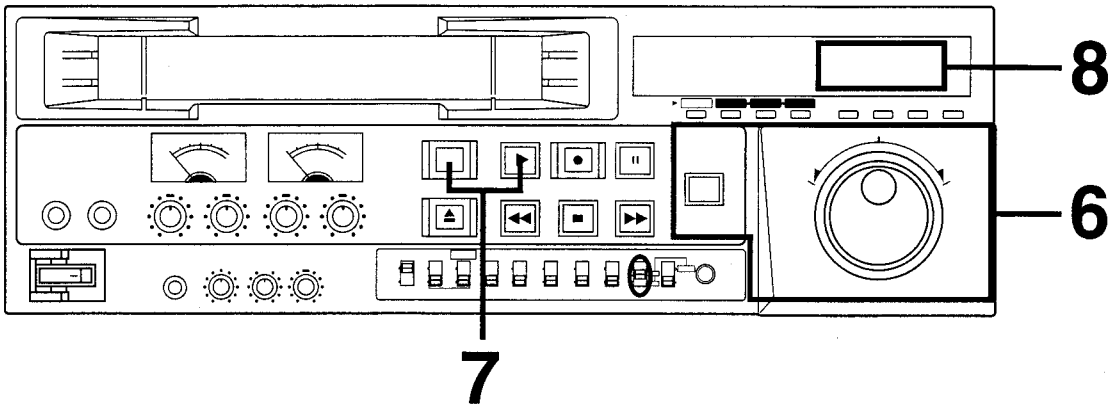


5. Press the RESET button.

The tape counter is reset to "0:00:00:00." The corresponding place on the tape is the edit end point.

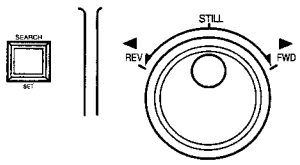


AUTO CUT OUT editing (simple automatic editing) (AG-8700 only)



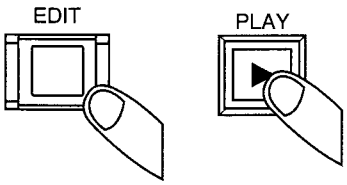
6. Find the edit start point by conducting a search operation and place the unit in the still picture mode.

Refer to page E-19 for details on search operations.



7. Press the PLAY button while pressing down the EDIT button.

The tape jogs back automatically for about 3 seconds, and editing commences.
(When colour framing for about 5 seconds)



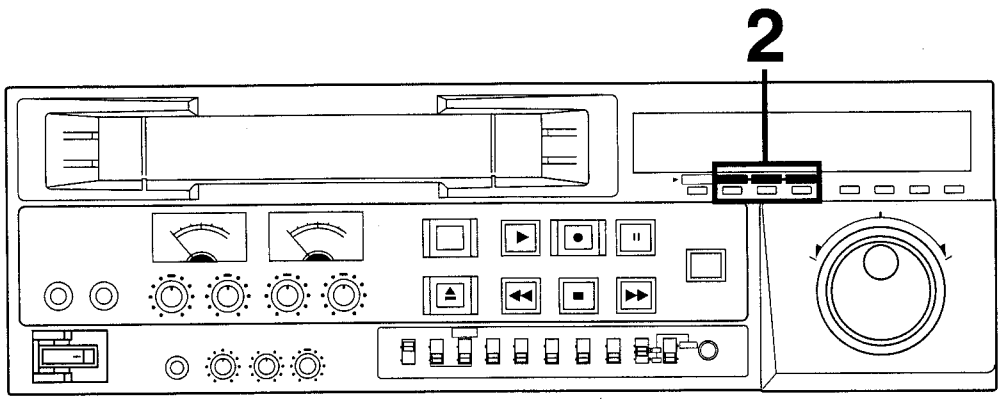
8. End of editing

When the tape counter reaches "0:00:00:00," editing will be automatically cut out.

- With insert editing, the tape is rewound automatically in the vicinity of the cut out point.

Split editing (AG-8700 only)

"Split editing" consists in changing the editing signals during insert editing.



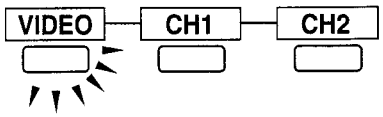
1. Execute insert editing.

See page E-29 for details.

2. Change the editing signals.

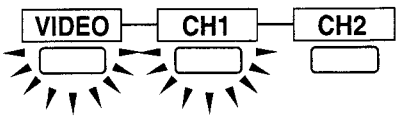
Example of operation:
Adding and inserting the AUDIO CH1 sound during the insert editing of the VIDEO/Hi-Fi signals

[1] **Insert editing of the VIDEO/Hi-Fi signals in progress**



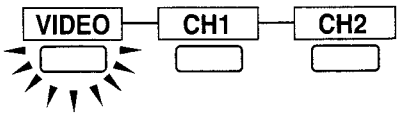
[2] **Press the AUDIO CH1 button.**

The AUDIO CH1 sound is insert-edited.



[3] **Press the AUDIO CH1 button again.**

The insert-editing of the AUDIO CH1 sound is terminated.



NOTES

- The editing mode cannot be switched to assemble editing while insert editing is in progress.
- The editing mode cannot be switched to insert editing while assemble editing is in progress.
- The editing signals cannot be switched during the approximately 3-second long AUTO BACK operation or while the tape is traveling in preparation. (When colour framing for about 5 seconds.)

Precautions for editing (AG-8700 only)

- If the EDIT START button is pressed without the editing mode having been set, the edit mode buttons (ASSEMBLE, VIDEO Hi-Fi, AUDIO CH1, AUDIO CH2) flash 6 times to prompt the operator to select the mode.

- Due to the preroll requirements, a pre-recorded section lasting at least 3 seconds must precede the edit start point. Editing cannot be conducted from the very start of the tape.
  Normally, the controller's preroll time is set to 5 or more seconds. However, when phase-synchronized editing is not to be performed, editing is possible with a 3-second preroll time by using an external sync signal (EXT).

- However, since the external sync signal cannot be used during colour framing editing, editing cannot be conducted if the section lasts only 3 seconds.

Precaution for assemble editing

- Bear in mind that about 2 seconds of the original recording after the edit end point will be erased.

Precautions for insert editing

- The picture will be thrown into disarray at the edit start and end points if insert editing is conducted using the VHS system on a tape which has been recorded using the S-VHS system.
- Since the control signal is used for the editing, make sure that the edit period does not extend beyond the recording made on the tape.

Precautions for EE picture

NON V-FLOAT: The positions of the external sync signal and EE picture's V-SYNC signal tally. The video start line is delayed by an amount equivalent to the time taken by the Time Base Corrector and other processing.

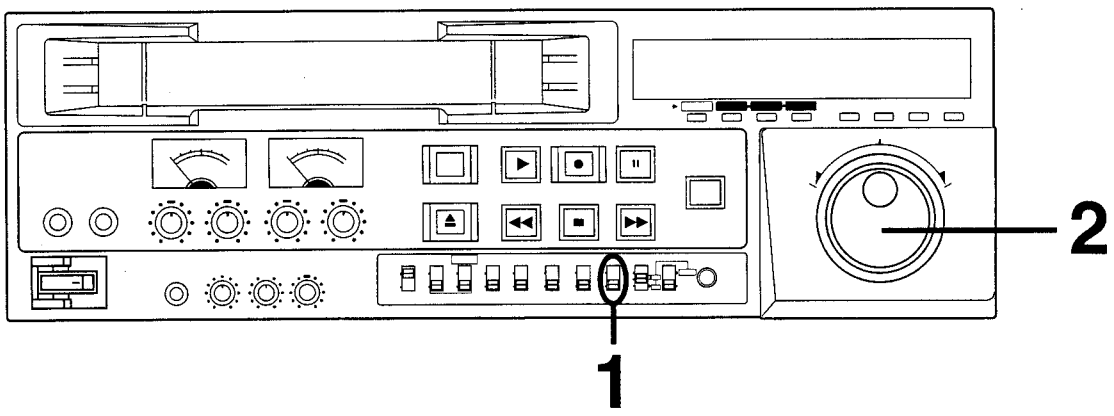
V-FLOAT: The positions of the external sync signal and EE picture's V-SYNC signal do not tally but the proper relationship between the video start line and V-SYNC signal is maintained.

- At the V-FLOAT position, the EE picture may move slightly in the perpendicular direction.

Precautions for REF signals

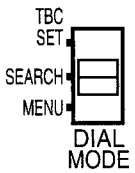
- Do not use the TV signals as the reference signals. Failure to heed this warning may result in unsuccessful editing since the status of the sync and subcarrier signals cannot be guaranteed in some transmission or radio wave conditions.

Using the dial menu functions



1. Set the DIAL MODE switch to MENU.

This disables all operations except those relating to the dial menu functions.
(This unit remains in the mode which was established before the dial menu functions were displayed.)



The following appears on the display.

The SETUP-MENU screen appears on the monitor which is connected to the MONITOR VIDEO connector.
The monitor display shows the following.

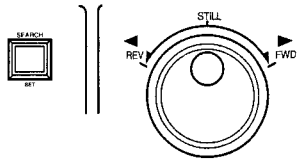
SETUP-MENU NO. 1001

01 SYNC ← Flashing display
02 STILL TIME SELECT
03 TAPE PROTECTION
04 READY OFF MODE SELECT
05 DIRECT SEARCH
06 SHORT FF
07 AUTO REW
↓

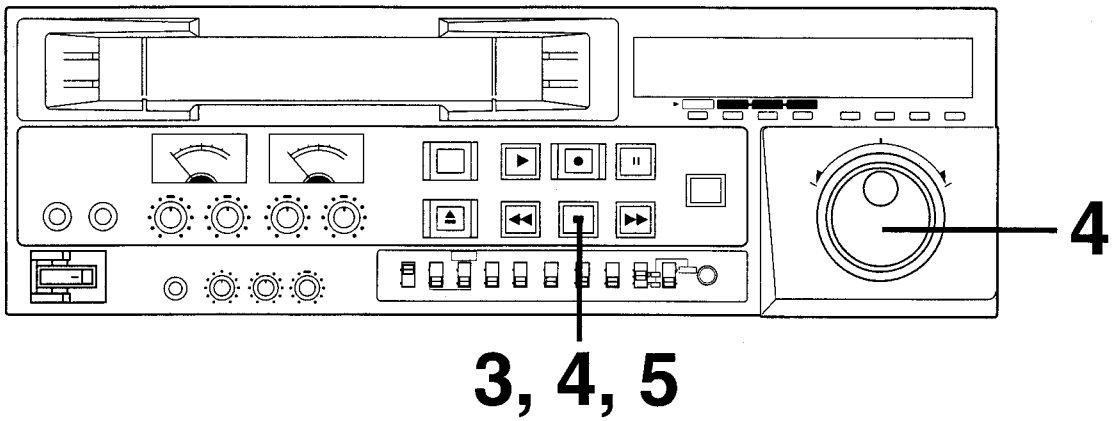
2. Turn the JOG dial and locate the setting item

When it is turned clockwise, the number is successively incremented from 1001 → 1002 → 1003 → etc. Conversely, when it is turned counterclockwise, the number is successively decremented. (The selected item is indicated by flashing.)

- Press the FF (page up) or REW (page down) button to scroll the menu up or down 1-page units.

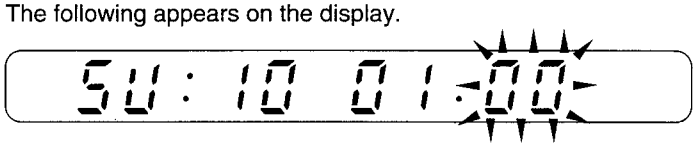


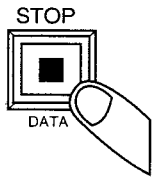
Using the dial menu functions



3. Press the STOP button when the desired item is located.

The set-up change screen is displayed while the STOP button is kept depressed.
The following appears on the display.





The monitor display showns the following.

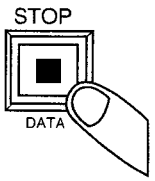
SETUP-MENU NO. 1001-00

01 SYNC

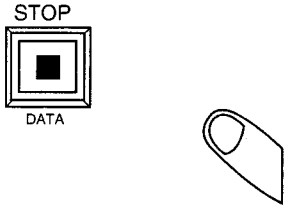
NORMAL ← **Flashing display**

4. Turn the JOG dial while pressing the STOP button.

The flashing display changes. Set the item to the desired value.

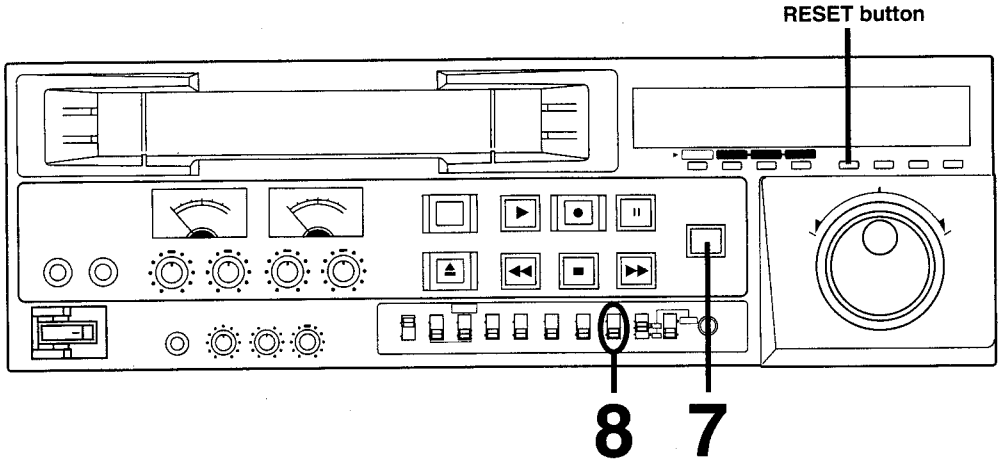


5. Release the STOP button.



NOTE

- The setting method differs for item No. 7010 and 7011. (See page E-46).

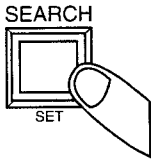


6. Repeat steps 3 to 5.

Set all the items whose set-up is to be changed to the desired value.

7. Upon completion of the settings, press the SEARCH (SET) button.

The set-up changes are now entered, and the following message appears.



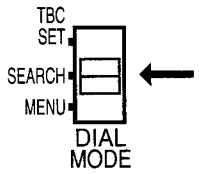

```
[SETUP-MENU END]
SET TO SEARCH POS
```

■ The display indication returns to the normal counter indication.

8. Return the DIAL MODE switch to SEARCH.

The normal screen is returned.

- If the switch is returned to SEARCH without the SET button having been pressed in step 7, the settings will not be entered.



MEMO

- To return set-up items to their original (factory-set) settings, press the RESET button when the SETUP-MENU is indicated. The following message appears.

```
SETUP-MENU  INIT. SET
OK ?  (PUSH PLAY KEY)
```

The values are restored to their original settings when the PLAY button is pressed.

Set-up menu screen

Operation/function set-up items

Item		Set-up value		Description of function
No.	Superimpose display	No.	Superimpose display	
1001	SYNC	00 01	NORMAL EXT	Selects the sync signal. 00: Synchronization with the input video signal. 01: Synchronization with the external sync signal.
1002	STILL TIME SELECT	00 01 02 03	2 SEC 30 SEC 1 MIN 5 MIN	When the unit is in the STOP or STILL mode, this selects the duration of time after which the unit is automatically placed in the TAPE PROTECTION mode in order to protect the tape. The setting is valid from the next time the STOP or STILL mode is activated.
1003	TAPE PROTECTION	00 01	READY OFF AUTO ADVANCE	Selects the operation to be performed in the TAPE PROTECTION mode. The setting is valied from the next time the TAPE PROTECTION mode is activated. 00: The READY OFF mode is established. 01: Each time the duration specified by the STILL TIME SELECT setting elapses, the tape is advanced three frames, and the unit enters the READY OFF mode approximately 30 minutes later.
1004	READY OFF MODE SELECT	00 01 02	DRUM ROTATE DRUM STOP UNLOADING	Selects the operation in the READY OFF mode. 00: Drum rotates due to loose tape. 01: Drum stops due to loose tape. 02: Unloading
1005	DIRECT SEARCH	00 01	OFF ON	Selects the direct search mode. 00: Normal search operation. 01: Unit is automatically placed in the search mode when the search dial is operated even without the search button being pressed.
1006	SHORT FF	00 01	OFF ON	Selects the short FF function. 00: No short FF operation. 01: Short FF operation is conducted at tape start.
1007	AUTO REW	00 01	OFF ON	Selects the auto rewind function. 00: Stops at tape end. 01: When the tape reaches the end, it is automatically rewound to the start and the unit stops operating.
1008	AUTO BACK **(AG-8700 only)**	00 01	OFF ON	Sets the auto back space recording function. 00: Normal recording/pause mode 01: When the REC button is pressed in the PLAY/STILL mode or if the PAUSE/STILL button is pressed during recording, the tape is rewound for about 3 seconds and the unit is placed in the standby mode. When the PAUSE/STILL button is then pressed, the unit conducts playback for 3 seconds and then recording commences.

[The shading denotes the initial setting.]

Video set-up items

Item		Set-up value		Description of function
No.	Superimpose display	No.	Superimpose display	
2001	IMAGE MODE SELECT	00 01	NORMAL EDIT	00: Select this setting for normal operation. The noise canceler and CAC function operate for both the luminance and chrominance signals. 01: Select for editing.
2002	VIDEO MODE	00 01 02	COLOUR AUTO B/W	Selects the colour mode of the input video signal. 00: Forces colour mode operation. 01: Automatically detects color mode by the input signal. 02: Forces black and white mode operation.
2003	NOTCH FILTER	00 01	OFF ON	Set the notch filter 00: Notch filter OFF. 01: Notch filter ON. (This switch has nothing to do with recording for AG-8700.)
2004	PB/EE SELECT	00 01	PB/EE EE	Sets the image that appears on the screen when the unit is in the STOP mode. 00: The playback image is output. 01: The EE image is output.
2005	WIDE MODE SELECT	00 01 02	AUTO WIDE NORMAL	Sets the unit's operation for WIDE IDs. 00: Records a WIDE ID on the tape when wide data is encountered in the input signal during recording. During playback, wide data is added to the Y and C output signals if there is a WIDE ID on the tape. 01: Appends wide data to the Y/C output signal and records a WIDE ID on the tape during recording. 02: No wide data is accepted.
2006	S-VHS REC **(AG-8700 only)**	00 01	OFF ON	Selects the recording format. 00: Recording are made in VHS format. 01: Recording are made in S-VHS format. (With an S-VHS tape only)
2007	HSW BLANKING SELECT	00 01	OFF ON	Specifies whether masking processing is to be performed in the switching area during playback.
2008	V BLANKING SELECT	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON OFF /ON	Specifies for each individual line whether to perform masking processing in the input signal vertical blanking interval during playback. 7 : 7_LINE 20 : 20_LINE 8 : 8_LINE 21 : 21_LINE 9 : 9_LINE 22 : 22_LINE 10 : 10_LINE 11 : 11_LINE 12 : 12_LINE 13 : 13_LINE 14 : 14_LINE 15 : 15_LINE 16 : 16_LINE 17 : 17_LINE 18 : 18_LINE 19 : 19_LINE

[The shading denotes the initial setting.]

Set-up menu screen (cont.)

Time code set-up items

Item		Set-up value		Description of function
No.	Superimpose display	No.	Superimpose display	
2010	DOC SELECT	00 01	3LINE-3D 3D ONLY	Selects the DOC mode. 00: 2-dimensional DOC up to 3H; 3-dimensional DOC for 4H and above. 01: 3-dimensional DOC (field DOC)
2011	FREEZE AT READY OFF	00 01	OFF ON	Selects whether or not to freeze the screen when READY OFF takes place. 00: Do not freeze. 01: Freeze.
2012	FREEZE AT STOP	00 01	OFF ON	Selects whether or not to freeze the screen when switching from PLAY to STOP. 00: Do not freeze. 01: Freeze.
2013	Y-DNR LEVEL SELECT	00 01 02	OFF LEVEL 1 LEVEL 2	Selects the DNR level for the luminance signal. 00: Performs no DNR processing on the luminance signal. 01: Performs DNR level 1 processing on the luminance signal. 02: Performs DNR level 2 processing on the luminance signal.
2014	C-DNR LEVEL SELECT	00 01 02	OFF LEVEL 1 LEVEL 2	Selects the DNR level for the chrominace signal. 00: Performs no DNR processing on the chrominance signal. 01: Performs DNR level 1 processing on the chrominance signal. 02: Performs DNR level 2 processing on the chrominance signal.
2015	TBC REMOTE	00 01	LOCAL REMOTE	Selects the TBC adjustment mode. 00: Adjustment is performed from the TBC SET. 01: Adjustment is performed by remote control from outside.
2019	TBC CONTROL SELECT	00 01	V-FLOAT NO V-FLOAT	Used to float the internal SYNC to enable H to be aligned with the reference signal and V to be aligned with the input signal. 00: Floating 01: Not floating

[The shading denotes the initial setting.]

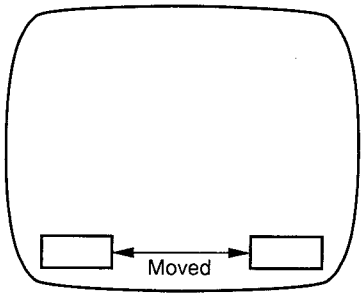
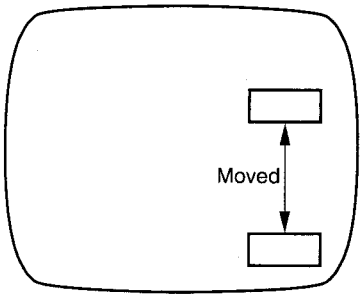
Audio set-up item

Item		Set-up value		Description of function
No.	Superimpose display	No.	Superimpose display	
3001	DOLBY NR	00 01	OFF ON	Sets the Dolby NR system. 00: Dolby NR system OFF. 01: Dolby NR system ON.
3002	AUDIO LIMITER **(AG-8700 only)**	00 01	OFF ON	Set the audio limiter function. 00: Dynamic volume is recorded in its original form. 01: Automatic volume limiter circuit operates to enable sound to be recorded without distortion even when the input level reaches an excessively high level at moments during recording. (This function works for normal sound only.)
3003	HI-FI REC **(AG-8700 only)**	00 01	OFF ON	Selects the Hi-Fi recording setting. 00: Only normal audio is recorded; no Hi-Fi audio is recorded. 01: Both Hi-Fi and normal audio are recorded.
3004	HI-FI INPUT SELECT **(AG-8700 only)**	00 01	HI-FI INPUT NORMAL INPUT	Selects input connectors during Hi-Fi sound recording. 00: Hi-Fi audio input connectors 01: NORM/Hi-Fi audio input connectors
3005	CH1 REC **(AG-8700 only)**	00 01	CH1 MIX	Selects the input during normal sound CH1 recording. 00: Records CH1 sound. 01: Records mixed CH1/CH2 sound.
3006	AUDIO CH2	00 01	AUDIO LTC	Switches normal audio on or off in CH2. 00: CH2 is used for audio recording. 01: CH2 is used as the LTC track.

[The shading denotes the initial setting.]

Set-up menu screen (cont.)

Superimpose set-up items

Item		Set-up value		Description of function
No.	Superimpose display	No.	Superimpose display	
4001	CHARACTER BACKGROUND	00 01	Selection is made while opserving superimpose display.	Selects background mode for VIDEO MONITOR superimpose display. 00: Black display = LTCR 00:00:00:00 01: Edge display = LTCR 00:00:00:00
4002	CHARACTER H-POSITION	00 01 02 03 04 05 06 07	Selection is made while opserving superimpose display.	Selects horizontal position for VIDEO MONITOR superimpose display; moves characters to right as No. is increased. 
4003	CHARACTER V-POSITION	00 01 02 03 04 05 06 07	Selection is made while opserving superimpose display.	Selects vertical position for VIDEO MONITOR superimpose display; moves characters to down as No. is increased. 
4004	STATUS SUPER	00 01	OFF ON	Selects whether VTR operation mode is to be indicated as a superimposed display. 00: VTR operation not displayed. 01: VTR operation displayed.

[The shading denotes the initial setting.]

Remote set-up items

Item		Set-up value		Description of function
No.	Superimpose display	No.	Superimpose display	
5001	EJECT/STOP FNCTN REM.	00 01	POSSIBLE NOT POSSIBLE	Enables or disables operation of panel EJECT/STOP button in remote mode. 00: Enables operation. 01: Disables operation.
5002	9P DEVICE TYPE SELECT	00 01	OTHER TYPES S-VHS ID	Selects ID code returned to 9P device type request command. 00: When connecting a controller not made by Panasonic. 01: When connecting a controller made by Panasonic.
5003	9P FF/REW MODE	00 01	LOADING UNLOADING	Selects the unit's operation in response to FF and REW commands. 00: FF or REW are excuted with the tape loaded. 01: FF or REW are excuted after the tape is unloaded.

[The shading denotes the initial setting.]

Set-up menu screen (cont.)

Editing set-up values

Item		Set-up value		Description of function
No.	Superimpose display	No.	Superimpose display	
6002	AUTO PREROLL ENTRY	00 01	NOT ENTERED ENTERED	Selects whether to enter IN point by preroll command when IN point has not been entered. 00: Not entered 01: Entered
6003	PREROLL TIME	00 01 : 05 : 10 : 15	0 SEC 1 SEC : 5 SEC : 10 SEC : 15 SEC	Selects preroll time for 9P control from 0 to 15 sec.
6004	PLAY DELAY	00 01 : 05 : 10 : 15	0 FRAME 1 FRAME : 5 FRAME : 10 FRAME : 15 FRAME	Selects play delay time during play start from 0 to 15 frames.
6005	FRAME SERVO	00 01 02	OFF ON COLOUR FRAME	Sets framing mode 00: Set to this position when signals not in conformity with standard signals are supplied. Framing is not conducted. 01: Framing is conducted if set to this position when signals in conformity with standard signals are supplied. 02: 4 sequence colour framing mode is activated.

[The shading denotes the initial setting.]

- At the SYNC EXT setting (item No. 1001), the COLOUR FRAME function does not operate, and only framing is conducted.
- Do not synchronize the phase at the source machine during colour framing editing. (Do this at the editor.)

Time code set-up items

Item		Set-up value		Description of function
No.	Superimpose display	No.	Superimpose display	
7001	TC INT/EXT SELECT **(AG-8700 only)**	00 01	INT EXT	Set this switch to EXT if an external time code connection has been made.
7002	TC MODE **(AG-8700 only)**	00 01 02	REGEN REC RUN FREE RUN	Selects the TC mode. 00: Operates to maintain continuity of the data on the tape. 01: Uses an internal preset value to advance the tape only during recording. 02: Uses an internal preset value to advance the tape all the time.
7003	VITC REC **(AG-8700 only)**	00 01	OFF ON	Selects whether or not to use VITC recording. 00: Don't use VITC recording. 01: Use VITC recording.
7004	VITC POSITION SEL-1 **(AG-8700 only)**	00 01 : 04 05 06 : 15	7 LINE 8 LINE : 11 LINE 12 LINE 13 LINE : 22 LINE	Selects VITC signal insertion line. *Same line as No. 7005 cannot be selected. (Avoid selecting an adjoining line.)
7005	VITC POSITION SEL-2 **(AG-8700 only)**	00 01 : 05 06 : 15	7 LINE 8 LINE : 12 LINE 13 LINE : 22 LINE	Selects VITC signal insertion line. *Same line as No. 7004 cannot be selected. (Avoid selecting an adjoining line.) **Note:** Do not select line 10 or 11 if the TBC facility is to be used at ON. Skew may make it impossible to read the VITC. There is no effect in the BYPASS mode.
7006	VITC REGEN **(AG-8700 only)**	00 01	PLAY PLAY + REC	Selects when to use VITC REGEN processing. 00: Perform REGEN processing during playback. 01: Perform REGEN processing during playback and when recording audio.
7007	TCG REGEN MODE **(AG-8700 only)**	00 01 02	TC*UB TC UB	Selects regeneration signal when TCG is in REGEN mode. 00: Regeneration for time code and user's bit. 01: Regeneration for time code only. 02: Regeneration for user's bit only.
7008	TC OUT SIGNAL REGEN	00 01	OFF TAPE REGEN	Sets the waveform to be output from the TIME CODE OUT connector when in the INTERNAL REGEN mode. 00: Outputs the playback signal without modification. 01: Outputs the playback signal with REGEN processing during SERVO LOCK only.

[The shading denotes the initial setting.]

Set-up menu screen (cont.)

Time code set-up items

Item		Set-up value		Description of function
No.	Superimpose display	No.	Superimpose display	
7009	UB BINARY GROUP FLAG **(AG-8700 only)**	00 01 02 03	NOT SPECIFIED ISO CHARACTER UNASSIGNED 1 UNASSIGNED 2	Selects the way the user's bit is used using TCG generation. 00: Not character set specified. 01: 8-bit character set conforming to ISO646 and ISO2022. 02: Undefined. 03: Undefined.
7010	TIME CODE PRESET **(AG-8700 only)**	00	TCG preset value is set while observing the screen.	Sets preset value of time code generator. 00:00:00:00~23:59:59:24
7011	U-BIT PRESET **(AG-8700 only)**	00	UBG preset value is set while observing the screen.	Sets preset value of user's bit. 00 00 00 00~FF FF FF FF
7012	EXT VITC READ **(AG-8700 only)**	00 01	REC EJECT+STOP+REC	Selects the mode for reading the VITC of the input video signal. 00: VITC is read only during recording. 01: VITC is read in the eject, stop or recording mode.
7013	9P VITC TO DUMMY LTC	00 01	OFF ON	Selects the response from 9P to CURRENT TIME SENSE when CH2 is set to "AUDIO." 00: REQUEST TIME DATA MISSING is returned. 01: VITC data is returned as LTC.
7014	9P INTERPOLATED VITC	00 01	HOLD VITC INTERPOLATED LTC	Selects the response method used to return the VITC CTL interpolation value from 9P in response to CURRENT TIME SENSE. 00: HOLD_VITC (74H 16H) is returned. 01: INTERPOLATED LTC (74H 14H) is returned.

7010/7011 setting method

1. Press the STOP button at item No. 7010 or 7011.
2. Turn the JOG dial and move the display to be changed (flashing display).
3. The value will change for item No. 7010 and 7011 when the JOG dial is turned while the STOP button is kept pressed.
4. Press the SEARCH (SET) button upon completion of the settings.

- The present time, code value is displayed as the initial value for item No. 7010 and 7011. When the RESET button is pressed, it will be reset to "00:00:00:00."
- Operation is not possible for item No. 7010 and 7011 unless the "TC INT/EXT SELECT" (item No. 7001) dial menu function set to "INT" and "TC MODE" (item No. 7002) dial menu function is set to "REC RUN" or "FREE RUN."
- Once the setting mode i entered for item No. 7010 or 7011, operation cannot be returned to the setting mode of any other item. When the SEARCH (SET) button is pressed upon completion of the setting, the change made to the previous setting for the item will be entered. On the other hand, when the DIAL MODE switch is set to SEARCH without pressing the SEARCH (SET) button first, all the settings including the one which was made previously will be canceled.

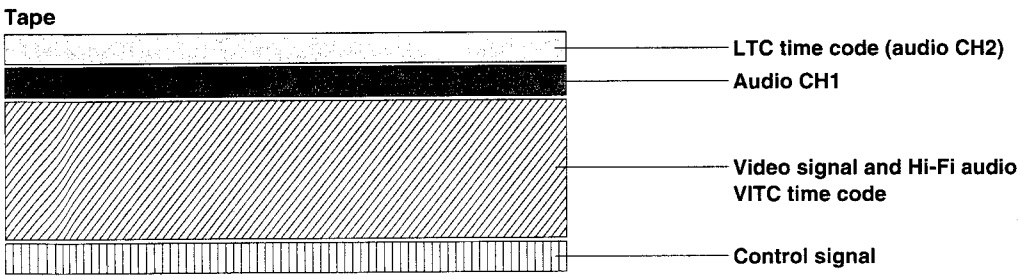
Time Code/user's bit

Time code

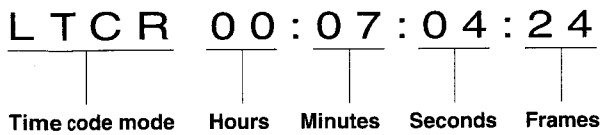
The "time code," which is based on the time code signal generated by the time code signal generator, recorded on tape, and read out by the time code signal reader, is used to display absolute positions on the tape in units of "hours:minutes:seconds:frames." Knowing an absolute position makes it possible to conduct editing accurately and search operations speedily.

There are two types of time codes: LTC (longitudinal time code) and VITC (vertical interval time code). The LTC is recorded on the tape's normal audio CH2 track. It is used to record the position information on the tape and user's bit information.

The VITC is recorded in the vertical blanking period of the video signals so that even without using the normal audio CH2 track, it is used to record the information regarding position on the tape and user's bit information.



The time code itself is indicated on the display and superimposed on the TV monitor.



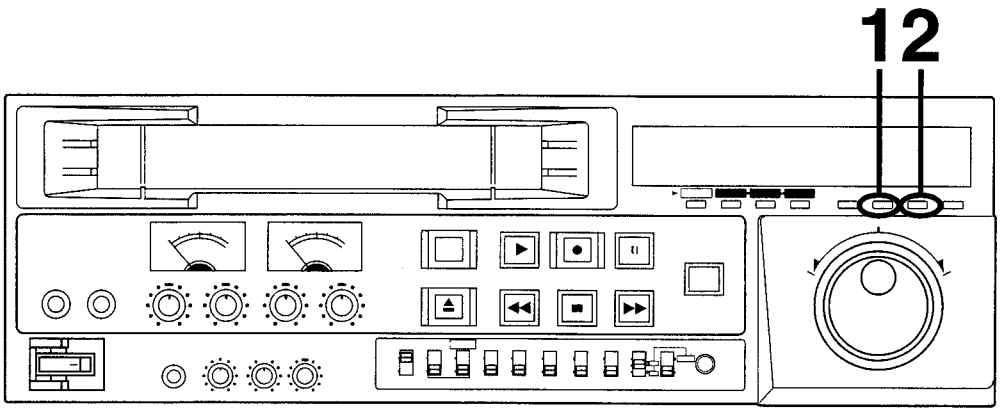
User's bit

Among the time code signals, the "user's bit" is an information released to the user. It is used to record the operator number or real time.

LUBR AB CD EF 88

A total of 16 characters—numbers 0 to 9, A, B, C, D, E and F—can be used for the user's bit.
(The characters "B" and "D" are displayed in small letters in the counter display.)

Setting the time code switches



1. Setting the CTL/TC/UB button

This selects the time code mode which is indicated on the display.

CTL: The CTL (control) signal value is indicated.
TC: The time code value is indicated.
UB: The user's bit value is indicated.

CTL/TC/UB

2. Setting the LTC/AUTO/VITC button

This selects the read out mode of the time code.

LTC: The LTC time code signal recorded on linear track CH2 is read out.
AUTO: AUTO: Priority is given to reading out the VITC signal when in the slow mode, and to reading out the LTC signal at all other times.
VITC: VITC: Only the VITC signal is read out.

- Interpolation is provided by the CTL signal when it is no longer possible to read out the time code signal in any of the modes.

LTC/AUTO/VITC

3. Settings with the dial menu functions

The time code set-up can be performed using dial menu function item No. 7001 to 7009. (See page E-45, E-46.)
The preset values for the time code and user's bit can be set using dial menu function item No. 7010 and 7011.

Recording the time code/user's bit

1. Recording the optional (preset) time code/user's bit

[1] **Set the "TC INT/EXT SELECT" (item No. 7001) dial menu function to "INT." (See page E-45.)**

[2] **Set the "TC MODE" (item No. 7002) dial menu function to "REC RUN." (See page E-45.)**

[3] **Set the preset value using dial menu function item No. 7010 or No. 7011. (See page E-46.)**

- Set the "AUDIO CH2" (item No. 3006) dial menu function to "AUDIO" when the LTC time code is not to be recorded. (See page E-41.)
- Set the "VITC REC" (item No. 7003) dial menu function to "OFF" when the VITC time code is not to be recorded. (See page E-45.)

2. Recording the continuous time code on the editing tape

[1] **Set the "TC INT/EXT SELECT" (item No. 7001) dial menu function to "INT." (See page E-45.)**

[2] **Set the "TC MODE" (item No. 7002) dial menu function to "REGEN." (See page E-45.)**

- Set the "AUDIO CH2" (item No. 3006) dial menu function to "AUDIO" when the LTC time code is not to be recorded. (See page E-41.)
- Set the "VITC REC" (item No. 7003) dial menu function to "OFF" when the VITC time code is not to be recorded. (See page E-45.)

3. Dubbing the LTC signal recorded on the tape (Dubbing the LTC signal with the settings below prevents deterioration in the LTC time code signal.)

[1] **Set to "LTC" mode with the LTC/AUTO/VITC button. (See page E-48.)**

[2] **Set to "TC" mode with the CTL/TC/UB button. (See page E-48.)**

[3] **Set the "TC MODE" (item No. 7002) dial menu function to "REGEN." (See page E-45.)**

[4] **Set the "TC OUT SIGNAL REGEN" (item No. 7008) dial menu function to "REGEN." (See page E-45.)**

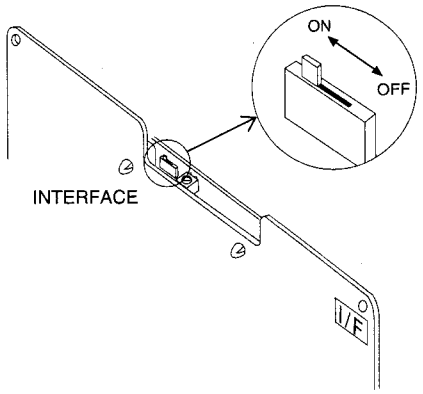
Setting the time code board switch

ALL DEL switch

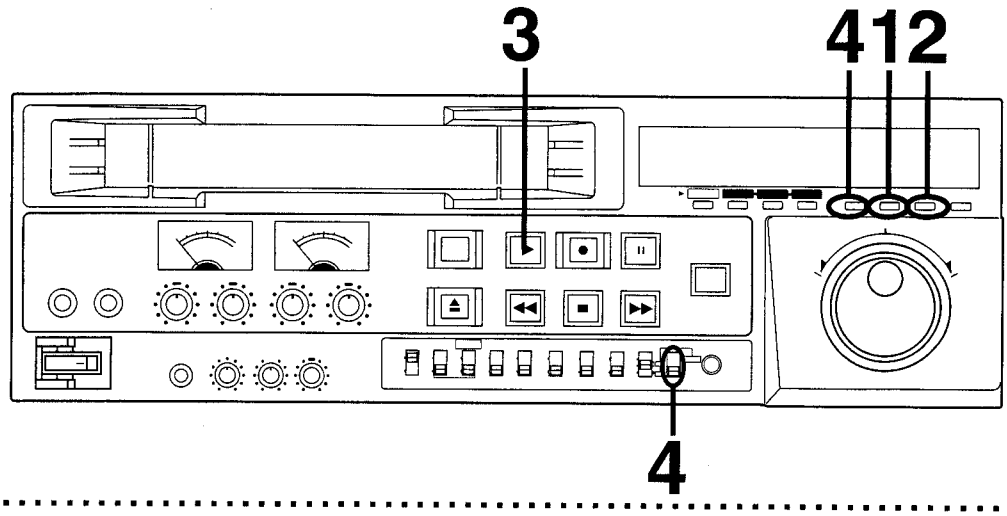
This selects the lines, where the VITC can be inserted for the input video signals, which are to be deleted during VITC recording.

ON (factory setting): All the lines (7 to 22) where the VITC can be inserted for the input video signals are deleted.

OFF : Only two lines where the VITC is inserted for the input video signals are deleted.



Playing back the time code/user's bit



1. Set to TC or UB mode with the CTL/TC/UB button.

TC: For time code playback.
UB: For user's bit playback.

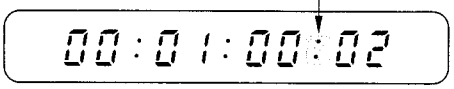
2. Set the LTC/AUTO/VITC button.

LTC: The LTC time code signal recorded on linear track CH2 is read out.
AUTO: Priority is given to reading out the VITC signal when in the slow mode, and to reading out the LTC signal at all other times.
VITC: Only the VITC signal is read out.

- Interpolation is provided by the CTL signal when it is no longer possible to read out the time code signal in any of the modes.

3. Press the PLAY button.

Display

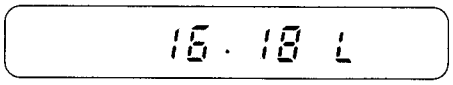


☐ Interpolation by CTL signal

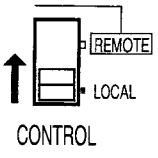
4. To check the VITC insertion lines during playing back.

Set the CONTROL Switch to "REMOTE" and press the RESET button.

Display

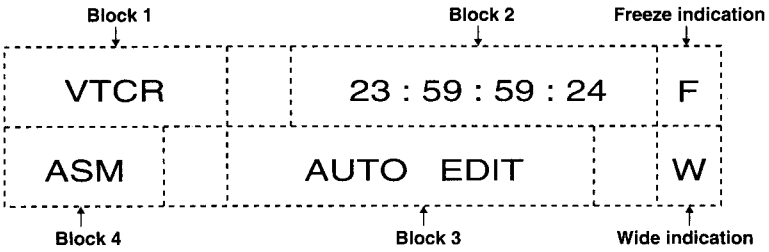


(When VITC is inserted in line 16 and 18.)



Superimpose screen

When the ON SCREEN switch in the front pocket is set to ON, the superimpose signal listed below are added to the signals output from the VIDEO MONITOR connector.
The superimpose display does not appear in the dial menu mode.



Block 1

The time code modes are abbreviated on the display using the following characters.

CTL: Control signal
TCG: Time code generator value
LTCR: Playback value of LTC time code
VTCR: Playback value of VITC time code
ETCG: External time code generator value
LUBG: Generator value of LTC user's bit
VUBG: Generator value of VITC user's bit
LUBR: Playback value of LTC user's bit
VUBR: Playback value of VITC user's bit
EUBG: Generator value of external user's bit

Block 2

The time code value is indicated in hours, minutes, seconds and frames, each with 2 digits.
(In the UB mode, no colon is displayed.)

12:34:43:21

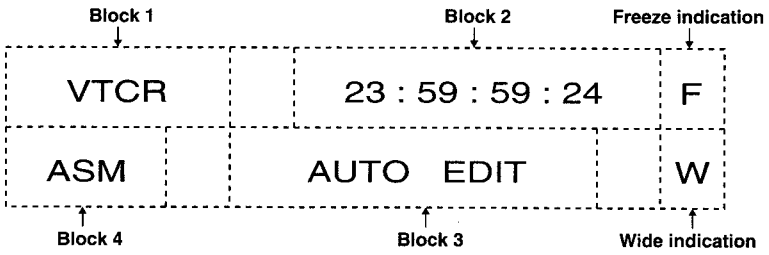
[ ] = Time code reading disabled

Block 3

The VTR operating modes are indicated as below.

EJECT (eject)
PLAY (playback)
REC (recording)
STOP (stop)
FF (fast forward)
REW (rewind)
STILL (pause)
EDIT (editing)
EPLY (edit play)
READY-OFF (ready mode release)

Superimpose screen (cont.)



Block 3 *(cont.)*

The search is also displayed.

JOG xxxxx (jog)
SHTL xxxxx (shuttle)

"xxxxx" denotes the search speed.

−1/25 Tape speed (in this case, search proceeds in the reverse direction at 1/25x normal playback speed)
↑
*: **Forward direction/-:reverse direction**

When the recorded part comes to an end during playback, the lamp below flashes and the image is frozen:
FREEZE

Block 4 (AG-8700 only)

The edit modes are indicated as follows.

ASM (Assemble)
V12 (Insert): VIDEO, AUDIO-CH1, AUDIO-CH2

NOTE

- The block 3, 4 display and wide indication appears only when the "STATUS SUPER" dial menu function (item No. 4004) is set to ON.

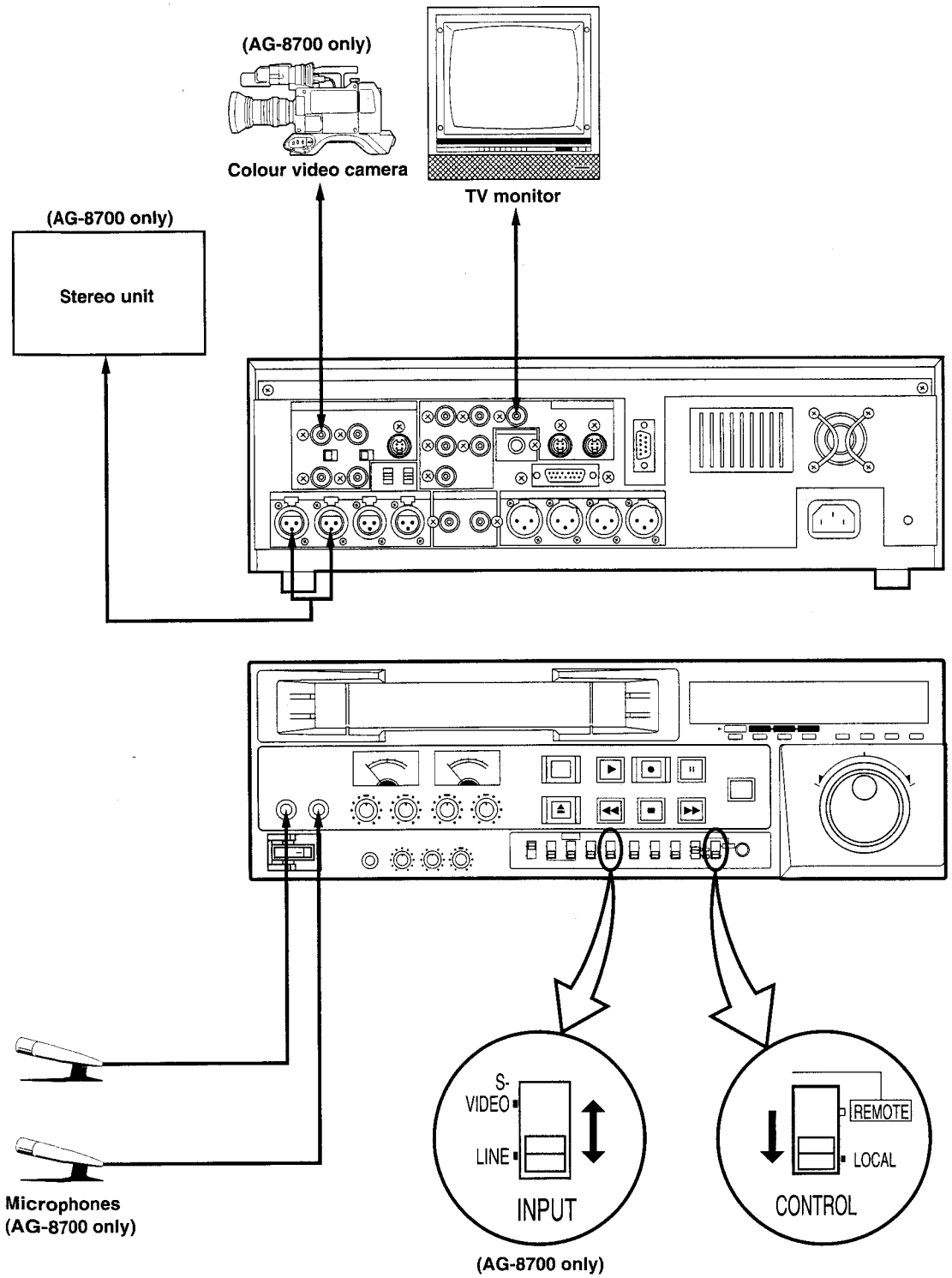
REFERENCE

- The superimpose display characters can be changed using the dial menu function (item No. 4001). (See page E-42.)
- The superimpose display position can be moved using the dial menu function (item No. 4002, 4003). (See page E-42.)

Connections for basic system

These connections are for editing using one S-VHS VTR.

- Set the CONTROL switch to LOCAL.
- Set the "SYNC" (item No. 1001) dial menu function to "NORM".
- Set the "AUDIO CH2" (item No. 3006) dial menu function to "AUDIO". (Set to LTC for editing with the LTC time code signal.)



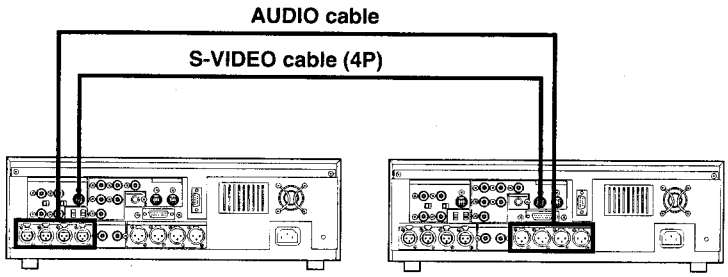
Dubbing connections

These connections are for editing using two S-VHS VTRs.
The ways to prevent deterioration in the picture quality caused by the dubbing connections are ranked as follows in terms of their effectiveness.
1. Use of S-VIDEO cable
2. Use of BNC cable
- Set the CONTROL switch to LOCAL.
- Set the "AUDIO CH2" (item No. 3006) dial menu function to "AUDIO". (Set this to "TIME CODE" when dubbing LTC time code signals.)
- Set the "IMAGE MODE SELECT" (item No. 2001) dial menu function to "EDIT".

1. Connections using S-VIDEO cable (4P)

Main setting (source unit)
- Dial menu function "SYNC" (item No. 1001) to "NORMAL"
- Dial menu function "IMAGE" (item No. 2001) to "EDIT"

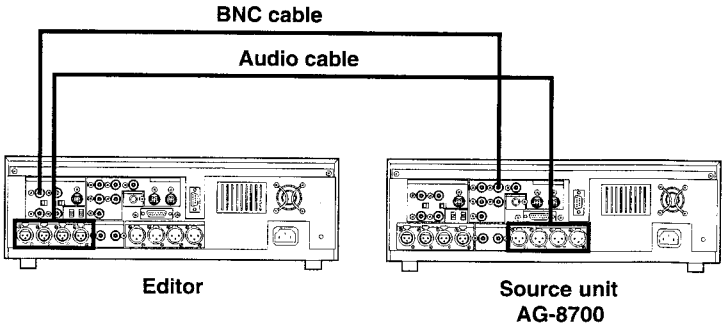
Main setting (editor)
- INPUT switch to "S-VIDEO"
- Dial menu function "SYNC" (item No. 1001) to "NORMAL"
- Dial menu function "IMAGE MODE SELECT" (item No. 2001) to "EDIT"



2. Connections using BNC cable.

Main setting (source unit)
- Dial menu function "SYNC" (item No. 1001) to "NORMAL"
- Dial menu function "IMAGE MODE SELECT" (item No. 2001) to "EDIT"

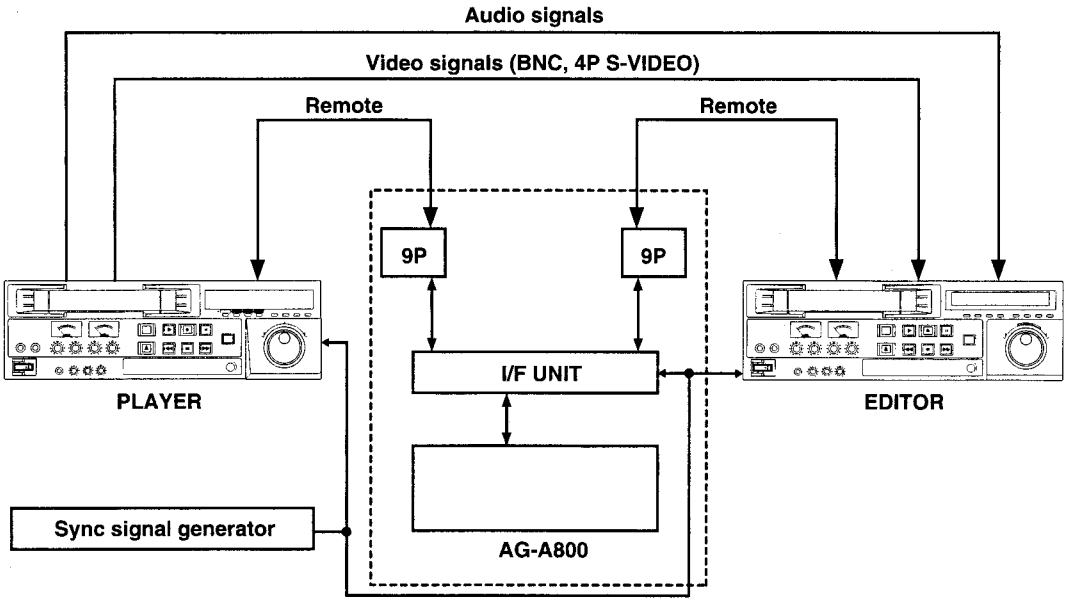
Main setting (editor)
- INPUT switch to "LINE"
- Dial menu function "SYNC" (item No. 1001) to "NORMAL"
- Dial menu function "IMAGE MODE SELECT" (item No. 2001) to "EDIT"



System using 9P editing controller

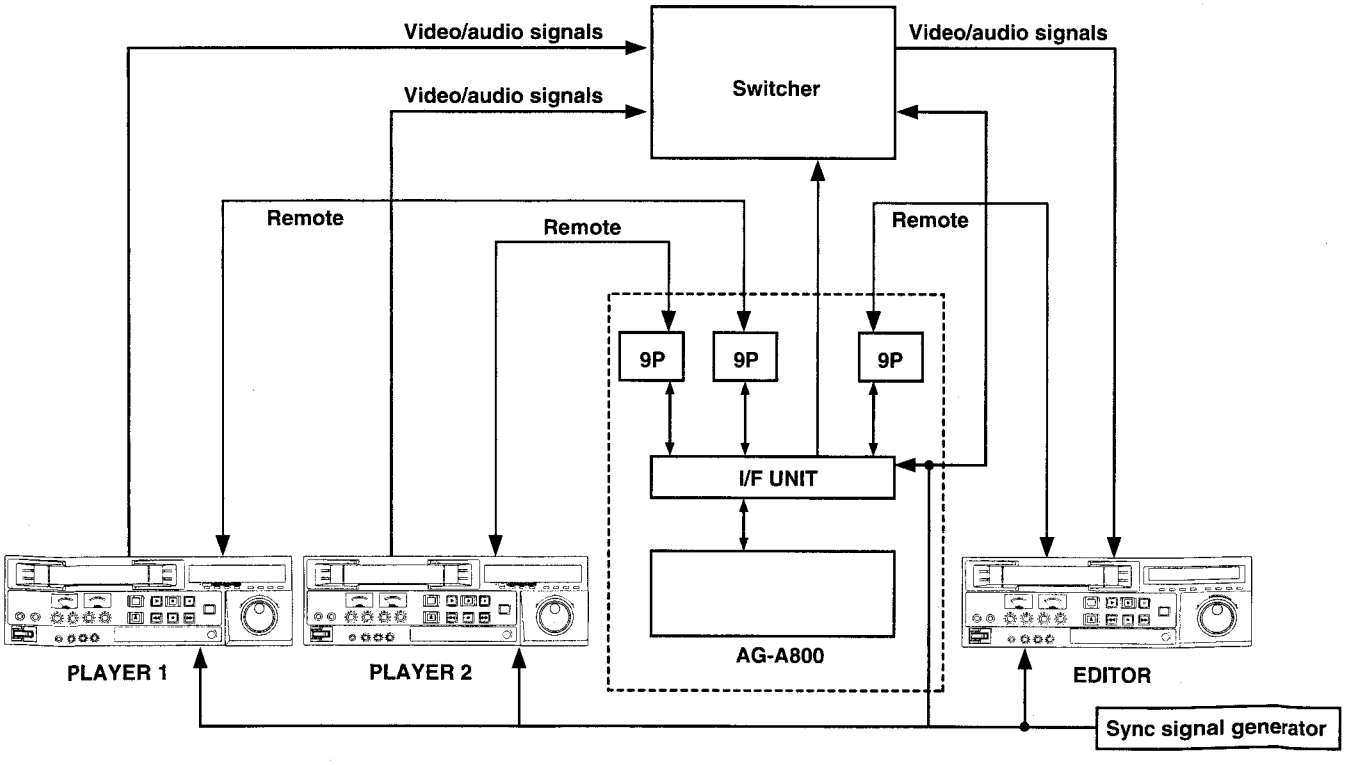
Editing with a high degree of accuracy and with almost no editing errors can be done and using the 9P editing controller (optional accessory) to conduct time code editing.
This unit contains its own time base corrector (TBC) and so alleviates the need for time-consuming TBC wiring during system editing.

System composed of one editor and one player



System composed of one editor and two players

(enabling AB roll editing)



System using 9P editing controller (cont.)

1. Connect the editing controller

- Connect it to REMOTE (9P) connector.
- Connect the audio signals.
- Connect the video signals.
- Connect the REF signals.

2. Set 9P DEVICE TYPE SELECT (item No. 5002).

Use the dial menu function to set this.

OTHER TYPES (set-up No. 00): When using a controller not made by Panasonic

S-VHS ID (set-up No. 01): When using a controller made by Panasonic

- Set to OTHER TYPES (SETUP NO. 00) when the AG-A800 (Ver. 2.00–2.52) is used.

3. Set the CONTROL switch to REMOTE.

4. Operate the unit from the editing controller.

For details on how to operate the editing controller, reference should be made to the Instruction Manual accompanying the controller.

- Set the editing timing to 8 frames when the AG-A800 (Ver. 1.00–2.52) is used.
- Set DIP switch 2-3 on the control panel to ON when the AG-A800 (Ver. 2.00–2.52) is used.

NOTES

- Set the editing timing for the 9P editing controller to 8 frames.
- When using an editing controller provided with a colour framing function, do not set the colour framing mode.
- Although, for insert editing using the 9P editing system, it is possible to set the editing channels independently for the time code signals and audio signals, this particular unit uses linear track CH2 for both the time code (LTC) and normal audio CH2. For this reason, the "AUDIO CH2" dial menu function (item No. 3006) must be set properly in accordance with the signals which are to be edited.
- For time code editing, set the "TC INT/EXT SELECT" dial menu function (item No. 7001) to "INT".
- When the 9P editing system is used, the "9P FF/REW MODE" dial menu function (item No. 5003) can be used to select full loading FF/REW and unloading FF/REW.
- Set the dial menu function (item No. 1003) "TAPE PROTECTION" to "AUTO ADVANCE" only when editing lengthy scenes during AB roll editing.
- For colour framing editing, be absolutely sure to set the SYNC selector on the editor to the NORMAL position. If, in a system in which the TBC is not connected to the player, the player is set to the search or jog mode at this time, the playback picture on the editor will be disturbed.

<Caution>

- Set the preroll time of the editing controller to "7 SEC".
- Use a colour framed tape in the editor unit.
- Use a colour programme tape in the source unit. This tape need not be colour framed.

Notes for Colour Framing

- When reviewing to check the Frame Editing after editing, the source unit is in the pause mode and the editor changes over to the internal synchronisation condition.
  Therefore, the Frame Lamp is off the whole time.
  Please check the colour framing at the Editing-In and -Out points in the review mode on the screen of the monitor.
- The following are remarks on the Colour Framing Editing, however, they do not matter in the ordinary editing system.

  Editing via Video Input Connector

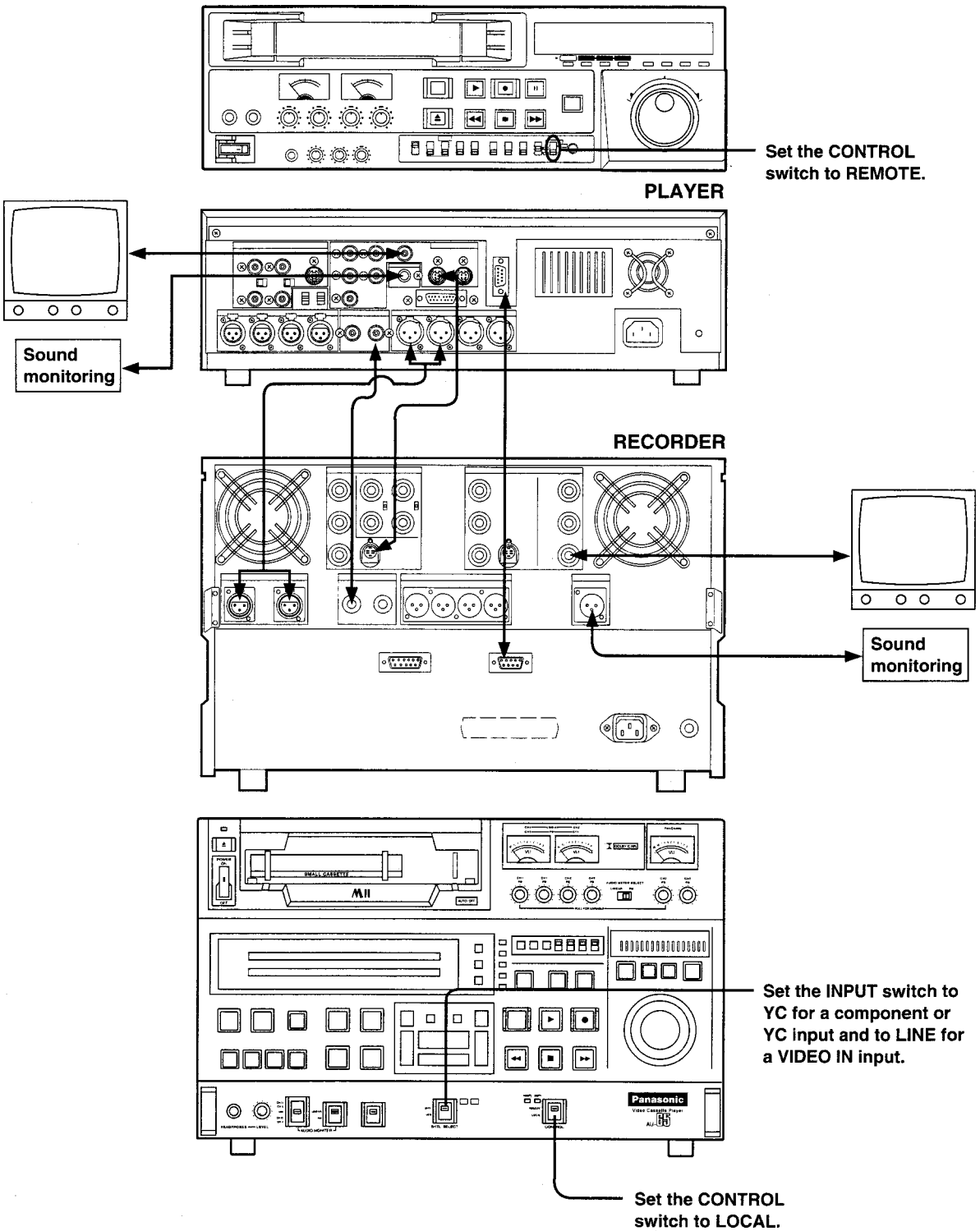
  1) The input video signal should be a CCIR standard PAL colour signal.
  2) Set the preroll time of the Controller to 7 seconds.
  3) The tape in the editor should be recorded by colour framing the CCIR standard PAL colour signal.
  4) Both tapes in the source and the editor should have continuity of the colour rotation in all editing sections. (There should not be any assemble or insert editing.)

  How to check whether colour framing was performed on a tape or not

  1) Insert the tape that you want to check into the AG-8700 and set the MENU function "Frame Servo" to "COLOUR FRAME".
  2) Input the standard CCIR PAL signal via the Video Input Connector and playback the tape.
  3) If the Frame Lock Lamp lights up, the recording on the tape is colour framed.

System using MII unit

This unit comes with an RS-422A interface facility which enables it to be connected with a professional/industrial MII VTR.


Set the CONTROL switch to REMOTE.
PLAYER
Sound monitoring
RECORDER
Sound monitoring
Set the INPUT switch to YC for a component or YC input and to LINE for a VIDEO IN input.
Set the CONTROL switch to LOCAL.

- The above system employs the model AU-65H MII VTR designed for commercial applications.

Error displays

When an error appears on the counter display, it means that a malfunction has occurred in the unit. When this happens, terminate operation without delay and remedy the trouble by following the instructions in the Instruction Manual.

Error display	Problem	Remedy
d	Condensation	Leave power on and wait until error display is cleared (see MEMO below).
E-2	Malfunction in elevator section	This occurs when the cassette has not been inserted properly. Turn off the power and switch it back on again, and check that the unit operates normally.
E-3	Malfunction in loading section	
E-4	Malfunction in cylinder section	This occurs when a heavy load is applied because condensation has formed on the tape or for some other reason. Turn off the power and switch it back on again, and check that the unit operates normally.
E-5	Malfunction in reel section	
E-6	Malfunction in tension section	
E-7	Malfunction in solenoid section	Turn off the power and switch it back on again, and check that the unit operates normally.

- Contact your authorized dealer if the unit does not function normally when the above remedial action has been taken.

***Fan motor error display**

WARNING
(FAN MOTOR LOCK)

When trouble occurs in the fan motor area, the warning display shown on the left is output to the monitor screen alternately with the regular counter display. Since the unit's power will be automatically turned off about 20 minutes after this warning is output, complete the work speedily and turn off the power. The power can be switched back on in about 20 minutes' time.

MEMO

Condensation

This phenomenon is caused by the same principle under which droplets of moisture (condensation) form on a window in a heated room when it is cold outside. It can occur when the unit or a tape is moved a location with a significantly different temperature or humidity. It also occurs:

- When the unit or tape is moved to a location full of steam which cannot escape or a location with a high humidity, or immediately after movement to a heated room
- When the unit or tape is moved quickly from a cold or cooled location to a high-temperature and/or high-humidity location

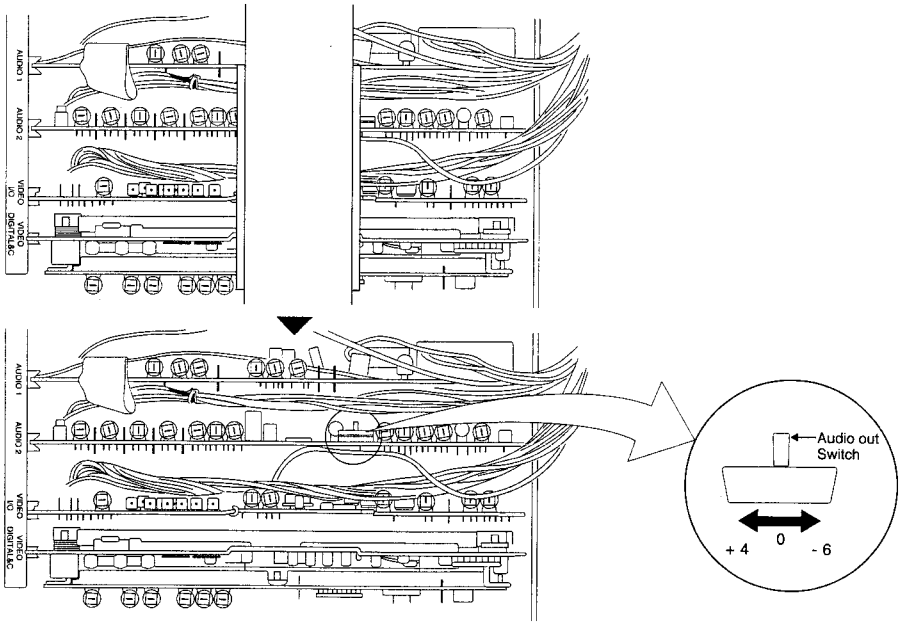
SHOULD A MALFUNCTION OCCUR, TURN OFF THE POWER IMMEDIATELY, TAKE HOLD OF THE POWER PLUG AND DISCONNECT IT FROM THE POWER SOCKET AND CONTACT YOUR DEALER. CONTINUED USE MAY CAUSE FURTHER DETERIORATION OR LEAD TO AN ACCIDENT.

Troubleshooting

Should trouble occur, check out the items listed below and make the recommended adjustments. If the trouble should persist, consult with your dealer.

Symptom	Inspection/adjustment	Ref.
No power.	■ Is power cord disconnected?	—
No operation even when function button is pressed.	■ Error on counter display? ■ CONTROL switch on REMOTE? ■ Search dial mode switch on MENU?	E-59 E-23 E-35
No tape fast forwarding or rewinding.	■ Has tape come to end after fast forwarding or rewinding? ■ Memory switch at AUTO STOP?	— E-20
No recording or editing. **(AG-8700 only)**	■ Cassette tab broken out? ■ Correct setting for input switch?	E-13 E-23
Playback accompanied by noise.	■ "IMAGE MODE SELECT" dial menu function set to "EDIT"? ■ Dirty video head?	E-39 E-65
Striping appears on part of picture during normal playback.	■ Has tracking been adjusted properly?	E-17
No colour on playback pictures.	■ Has colour mode been set to B/W mode by dial menu function?	E-39
Disturbances affect playback picture at regular intervals.	■ Is vertical sync of TV monitor adjusted properly? ■ Strong fluctuations in supply voltage during recording? ■ Is cassette tape acceptable?	— — —

Setting the audio switches



The AUDIO OUT level can be selected using the switch on the AUDIO2 circuit board (located below the board's metal clamp).

Servo reference

This unit automatically selects the input video signal selected by the INPUT switch (AG-8700 only), the REF VIDEO signal supplied from the REF IN connector or the internal sync signal (INT) as the servo reference signal. The relationship between the "SYNC" dial menu function (item No. 1001) and servo reference signal during normal playback and recording is as described below.

■ During playback

DIAL MENU FUNCTION ITEM No. 1001	Input signal mode		Reference signal
	VIDEO IN signal (AG-8700 only)	REF IN signal	
NORMAL	○	○	REF IN signal
	○	×	INT sync signal
	×	○	REF IN signal (AG-8700 only)
	×	×	INT sync signal (AG-8700 only)
EXT	○	○	REF IN signal
	○	×	INT sync signal
	×	○	REF IN signal (AG-8700 only)
	×	×	INT sync signal (AG-8700 only)

■ During editing or recording

DIAL MENU FUNCTION ITEM No. 1001	Input signal mode		Reference signal
	VIDEO IN signal (AG-8700 only)	REF IN signal	
NORMAL	○	○	VIDEO IN signal
	○	×	VIDEO IN signal (AG-8700 only)
	×	○	REF IN signal (AG-8700 only)
	×	×	INT sync signal (AG-8700 only)
EXT	○	○	REF IN signal
	○	×	INT sync signal
	×	○	REF IN signal (AG-8700 only)
	×	×	INT sync signal (AG-8700 only)

"O": signal is supplied; "X": signal is not supplied.

Connector signals

REMOTE 9P connector

Pin no.	Description of signal
1	GND
2	TRANSMIT A
3	RECEIVE B
4	RECEIVE COMMON
5	SPARE
6	TRANSMIT COMMON
7	TRANSMIT B
8	RECEIVE A
9	GND

S-VIDEO IN/OUT connectors (4P)

Pin no.	Description of signal
1	Y GND
2	C GND
3	Y signal
4	C signal

AUDIO IN/OUT connectors (XLR)

Pin no.	Description of signal
1	GND
2	HOT
3	COLD

TBC REMOTE connector (15P)

Pin no.	Description of signal
1	———
2	BLACK LEVEL
3	C LEVEL
4	GND
5	+ 12 V
6	SYSTEM Hϕ
7	SYS. SC COARSE (2)
8	– 12 V
9	CHROMA PHASE
10	VIDEO LEVEL
11	RET GND
12	———
13	———
14	SYS. SC FINE
15	SYS. SC COARSE (1)

REMOTE 34P connector
(option)

Pin no.	Description of signal
1	REC SWITCH*1 *3
2	PLAY SWITCH*1
3	FF SWITCH*1
4	REW SWITCH*1
5	STOP SWITCH*1
6	———
7	PAUSE SWITCH*1
8	CASSETTE IN SWITCH*2
9	CUT IN SWITCH*1
10	———
11	SERVO LOCK*2
12	GND
13	SWITCH STEP*1
14	REVERSE COUNT*2
15	CUT OUT SWITCH*1 *3
16	EDIT SWITCH*1 *3
17	REVERSE IN*2
18	CONTROL PULSE OUT
19	REMOTE 19*1
20	START MARK
21	EJECT SWITCH*1
22	INSERT CH1*1 *3
23	REC HOLD*2 *3
24	PLAY HOLD*2
25	FF HOLD*2
26	REW HOLD*2
27	INSERT CH2*1 *3
28	———
29	PAUSE HOLD*2
30	REMOTE 30*1
31	CUT IN HOLD*2
32	INSERT VIDEO*1 *3
33	REMOTE 33*1
34	+ 12 V

*1 Active low (INPUT)
*2 Open collector, active low (OUTPUT)
*3 For AG-8700 only.

Rack Mount Adaptor (Option)

The Rack Mount Adaptor AG-M730-E is used to mount the unit on the IEC standard rack.

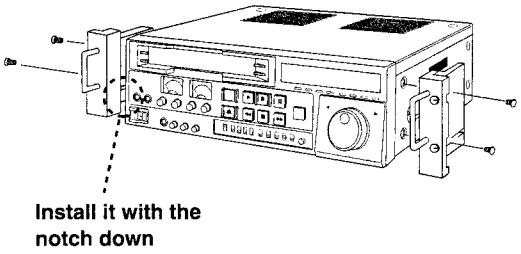
Installation of the AG-M730-E

1. Remove the 4 screws

from the side cabinet of the unit.

2. Use the 4 screws supplied

with the AG-M730-E to install to the unit.



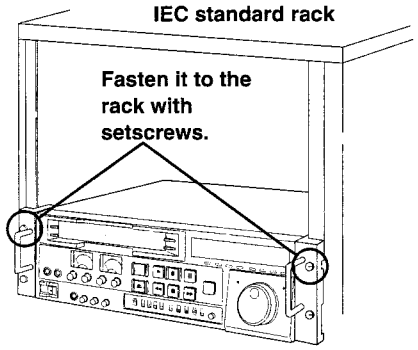
Mounting on the IEC standard rack

1. Remove the 4 rubber legs

from the bottom of the unit.

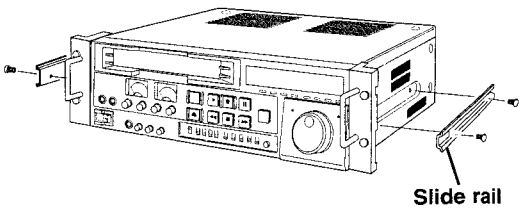
2. Mount the unit on the rack.

■ Be sure to install a ventilation fan (air volume of about 3.3 m 2/sec.) on the top of the rack.



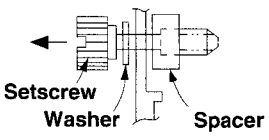
Installation of slide rails

■ Use a complete slide rail and bracket unit for 457 mm length (part No. CC3004-99-0017) or 610 mm length (part No. CC3004-99-0018) of Chassis Track. (The complete slide rail and bracket unit is not available from Panasonic.)



■ When using the slide rail, remove the setscrews. The setscrews can be removed by pulling in the direction of the arrow. Keep the removed setscrews, washers and spacers in a proper place.

- For the details, contact your authorized service personnel.



Accessories

Standard accessory

Check that the standard accessory below are packed with the unit.

Power cord ..... 2 pcs.

Optional accessories

S-VIDEO cable (4P) ..... Model No. AG-C71 (5m)
Model No. AG-C70A (3m)
Model No. AG-C71A (5m)

Editing controller ..... Model No. AG-A800
Model No. AG-A770
Model No. AG-A350

Rack-mounting adaptor ..... Model No. AG-M730

34-pin Remote Connector ..... Model No. AG-IA834

Cassette tapes

This unit is designed as a product which is required to demonstrate a high degree of reliability in such applications as editing and transmission. As such, use of the Panasonic video tapes listed below is recommended so that the unit's recording reliability will be maintained.

- **S-VHS video cassettes**
- **VHS video cassettes**

Regular inspections

Head cleaning

If the screen should appear as shown below, it means that the video heads are dirty. Use the optional cleaning tape (NV-TCLA) to clean the heads. Consult with your dealer if the symptoms should persist even after cleaning.

- Repeated head cleaning will shorten the service life of the video heads.
- Nothing can be recorded on the head cleaning tape.

Maintenance

Before proceeding with maintenance, set the power switch to OFF and, remembering to take hold of the power plug, disconnect it from the power outlet.
Use a soft cloth to clean the cabinet. With stubborn stains or dirt, dilute some dish washing liquid, allow a cloth to soak in it, and then wring it out and clean. After having removed the stains or dirt, use a dry cloth to wipe away any moisture.
Do not use paint thinners or benzine.

Storage

- Avoid storing the unit in a location where the temperature is extremely high or low.
- Under no circumstances should the unit be left outdoors.
- If there are no plans to use the unit for a prolonged period of time, set the power switch to OFF and, remembering to take hold of the power plug itself, disconnect it from the power outlet. This is done to safeguard against accidents and breakdowns.
- Before storing, always remember to remove the cassette tape if one is still inside the unit.

Specifications

General

Power Supply:	220 – 240 V AC, 50 – 60 Hz
Power Consumption:	AG-8700; 82 W
	AG-8600; 68 W

is the safety information.

Recording System:	2 head-helical scanning, azimuth recording, S-VHS/VHS standards
Tape Speed:	23.39 mm/sec (under normal conditions)
Tape:	S-VHS tape, VHS tape
Recording Time:	180 minutes (with NV-E180)
FF/REW Time:	Approx. 2 minutes (with NV-E180)
Operating Humidity:	35% to 80%
Operating Temperature:	5°C – 40°C (during operation)
Dimensions (W × H × D)	424 × 131.5 × 415 mm
Weight:	About 11.5 kg

Video

Television Format:	PAL TV system;	625 lines, 50 fields
Input/Output:	Line (BNC);	1.0 Vp-p, 75 Ω
(For "Input", AG-8700 only)	S-VIDEO (4P);	Y: 1.0 Vp-p, 75 Ω
		C: 0.3 Vp-p, 75 Ω (burst)
	COMPONENT (BNC);	Y: 1.0 Vp-p, 75 Ω
		P_B: 525 mVp-p, 75 Ω
		P_R: 525 mVp-p, 75 Ω
		(75% Colour Bar without set-up)
Horizontal Resolution:	VHS;	250 lines
	S-VHS;	400 lines
S/N Ratio:	VHS;	45 dB (SC ON, colour mode)
	S-VHS;	46 dB (SC ON, colour mode)

Audio

Input:	Line Hi-Fi (XLR);	+4/0/–6 dBs, hi impedance, balanced
(AG-8700 only)	Line NORM (XLR);	+4/0/–6 dBs, hi impedance, balanced
	MIC;	–50 dBv, 4.7 kΩ, unbalanced
	Time code (BNC);	1.0 Vp-p, 10 kΩ, unbalanced
Output:	Line Hi-Fi (XLR);	+4/0/–6 dBs, 50 Ω, balanced
	Line NORM (XLR);	+4/0/–6 dBs, 50 Ω, balanced
	Headphones (6.3 mm);	–60 dBv ~ –20 dBv, 8 Ω, unbalanced
	Monitor (phono);	0 dBv, 600 Ω unbalanced
	Time code (BNC);	2.4 Vp-p, low impedance, unbalanced
Track Number:	4 tracks (2 normal audio tracks, 2 Hi-Fi audio tracks)	
S/N Ratio:	48 dB (with Dolby NR switch ON, for normal sound)	
Hi-Fi dynamic range:	More than 90 dB	
Audio Frequency Response:	50 Hz to 12 kHz (normal sound)	
	20 Hz to 20 kHz (Hi-Fi sound)	

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.